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ABSTRACT

THIS IS AN EXTENSIVE STUDY OF ANN ARBOR'S FIRST SCHOOL DESEGREGATION EFFORT, INVOLVING THE 1965 CLOSING OF JONES ELEMENTARY SCHOOL AND SUBSEQUENT REASSIGNMENT OF ITS PREDOMINANTLY NEGRO POPULATION TO PREDOMINANTLY WHITE SCHOOLS. THE RESEARCH FOCUSED ON THE FIRST YEAR OF SCHOOL DESEGREGATION, EXPLORING ACADEMIC, SOCIAL, BEHAVIORAL, AND ATTITUDINAL CHARACTERISTICS (1) IN THE CHILDREN TRANSFERRED FROM JONES, (2) IN A RACIALLY MIXED GROUP FROM MACK SCHOOL (WITH NO CHANGE IN SCHOOL SETTING), AND (3) IN PREDOMINATELY WHITE RECEIVING-SCHOOL CHILDREN. AT THE END OF A YEAR OF DESEGREGATED SCHOOLING, HALF THE TRANSFER PUPILS SHOWED 5 OR MORE POINTS GAIN IN IQ, AND 37 PERCENT SHOWED NORMAL OR GREATER GAINS IN READING. HOWEVER, GAINS MADE BY THE TRANSFER GROUP WERE SMALLER, ON THE WHOLE, THAN GAINS MADE BY THE OTHER TWO GROUPS. FORTY NEGRO TRANSFER PUPILS (STILL IN ELEMENTARY RECEIVING SCHOOLS), STUDIED IN A LIMITED FOLLOW-UP 2 YEARS LATER, WERE AT BEST HOLDING THEIR OWN ACADEMICALLY, RELATIVE TO NATIONAL NORMS. THERE WAS NO EVIDENCE TO SUGGEST THAT THE NORMAL PROGRESS OF WHITE RECEIVING-SCHOOL CHILDREN WAS INTERRUPTED BY THE TRANSFER. (AUTHOR)

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SCHOOL DESEGREGATION VIA COMPULSORY PUPIL TRANSFER: EARLY EFFECTS ON ELEMENTARY SCHOOL CHILDREN

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Ann Arbor Public Schools
Ann Arbor, Michigan

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In 1964, as Ann Arbor began to prepare for the closing of a predominantly Negro elementary school, Superintendent of Schools Jack Elzay commented to this effect: "If we are going to take this step, we are going to do some systematic research on its consequences." Former superintendent Elzay believed it to be the school system's obligation to the desegregated pupils and their parents, to the community at large, and to the profession to examine carefully Ann Arbor's first desegregation effort, and to follow the progress of the children involved throughout their local school careers. This man's convictions were a primary impetus for the present study; his encouragement and support, without which it could not have been begun, are gratefully acknowledged.

A substantial segment of the Ann Arbor Public Schools staff, as well as the Board of Education, must share in the credit for this effort. Members of the central administrative staff, headed by current Superintendent W. Scott Westerman, Jr., and Assistant Superintendents Sam Sniderman and Gerald Neff, coped admirably with the demands of this study and have been helpful in countless ways. Principals of the participating schools graciously accepted the research teams which almost literally camped on their school steps for a month or so during each of the data collection periods, managing always to ferret out the extra nook or cranny needed for testing, assisting with arrangements, and providing much-needed liaison with teachers and parents. Teachers were especially gracious in accommodating the demanding testing schedules, and most of them devoted many hours, beyond those for which they were compensated, to the thoughtful recording of their observations of children. School secretaries, the good right arm of any school operation, were indispensable as the providers and conveyers of information, as attenders to endless details, and as general troubleshooters.

A number of University of Michigan faculty members gave generously of their time and talents as informal consultants on this project. Among those whose efforts deserve special mention are Daniel Katz, William C. Morse, and Stephen B. Withey, who helped with the early conceptualization of the study. Professor Withey's dual role as research scientist and member of the Board of Education made him an especially valuable adviser. Other University staff members deserving special thanks are Joseph Veroff, Loren S. Barritt, and Edgar Epps (now of Tuskegee Institute), who directed related substudies described elsewhere in this report, and Steven Schwartz, who handled skillfully the tremendous volume of computer work for the study.

The more than 60 graduate students and former teachers who comprised the testing personnel for this project were as competent and conscientious a crew as one could find. Their untiring efforts, their genuine interest in the children, and the finesse with which they handled always demanding and often stressful assignments were essential to the collection of valid data, and are greatly appreciated. Also deserving a vote of thanks for their help with data collection are the school social workers who interviewed the parents of the desegregated pupils, and Mary Whiting of the Washtenaw County Health Department, who provided us with audiometric test results.

The study was launched with local funds, supplemented by a grant from the New World Foundation, and in the later stages was funded in large part by the U.S. Office of Education. The financial assistance of these two agencies is acknowledged with gratitude.

The real stalwarts in this project, for whose efforts no amount of praise can suffice, were the staff members -- past and present -- of the Ann Arbor Public Schools' Office of Research. Over a three-year period, some 20 people worked endless hours scoring and coding the thousands of tests administered, and checking data prints. Former staffer Janet Goodwin deserves special mention in this regard, having compiled what must be a world record for work volume, accuracy, and patience in those activities. Edna Kelly served as a highly capable research assistant and coordinator during the first year of the project. Her departure prior to the final data collection effort was less than disastrous only because her replacement, Carolyle J. Towers, was equally capable and quickly familiarized herself with her new role, becoming a key member of the team almost overnight. Mrs. Towers, in addition, was responsible for much of the work on the literature review, compiled a part of the appendix material and a good many tables, and edited the entire report. CJ Brattin and Ruth Bender, who shared earlier in the scoring and coding of data, compiled material for many of the tables and representative comments from the interviews of pupils and parents. Mrs. Bender likewise served as a building coordinator during the testing, and subsequently supervised the collection and coding of material from school records. Margaret Comiskey transferred the data to approximately 100,000 IBM cards with so few errors that verification

of her work was a dull job, and Carmella Leavy and Mary Fuerstnau worked long hours typing the manuscript. To all of these people, whose support, good humor, and dedication were as important to the completion of this task as their many talents, go the warmest thanks.

Last to be mentioned, and those to whom the deepest debt is owed, are the children and parents whose story is told in this report.

P.M.C.

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Chapter 1

INTRODUCTION

The 1954 Supreme Court ruling against public school segregation cast the nation's educators into a potentially powerful role of setting educational reforms to enhance the social and economic betterment of Negroes. For a complex set of reasons, educators across the nation were then -- and continue to be -- confronted with widespread racial imbalance in schools and classrooms: de facto segregation, indicted as a barrier to equal opportunity. De facto segregation has become exaggerated by rapid expansion of the Negro population, reflecting a substantially higher birth rate for Negroes; by the continuing movement of whites to the suburbs and large numbers of Negroes to the cities, where most become encapsulated in racially homogeneous neighborhoods; by the firm entrenchment of the neighborhood school, which inevitably reflects the social, economic, and racial characteristics of the area served.

Over the past several years, increasing numbers of communities have begun to seek appropriate means for reducing racial imbalance in public schools, believing this to be a necessary first step in providing equal educational opportunities for today's Negro child. Redistribution programs adopted in some communities had been in effect for several years when the present study was begun, and other communities have since followed suit; yet systematic evidence as to the effectiveness of these programs has been slow to accumulate. As the Ann Arbor Public Schools confronted the issue of de facto segregation during 1964, it became clear that little was available from elsewhere to guide a choice among possible solutions, or expectancies concerning the effects of desegregation on the children involved.

The present study was undertaken to assess systematically one solution to de facto segregation -- compulsory transfer of the population of a predominantly Negro elementary school to predominantly white schools. Such a plan was adopted by the Ann Arbor public school system during the year 1965.[1] The elementary program was terminated in a school whose Negro enrollment had reached 80 percent and promised a continued upward trend. Pupils from that school were reassigned, on a geographic basis, to six receiving schools, all but one sufficiently distant from the home district to require busing of pupils.

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[1] The events leading to this action, along with pertinent facts about the community and its public schools, are summarized in Appendix A.

The present study is directed, both broadly and in depth, to the consequences of this action. It represents what appeared at the time to be a unique attempt to find out, empirically, what happens when white and Negro children with divergent backgrounds and limited interracial experience are brought together in the classroom. It focuses on the first year following the transfer, a particularly critical period. It has been our expectation, however, that first-year findings would serve also as a basis for subsequent study of long-term effects on attitudes, goals, and accomplishments.

The study was launched in the spring of 1965, with the help of a small grant from the New World Foundation. During the late spring, a broad pretransfer assessment was carried out, to provide baseline data not only for the pupils to be transferred but for a potential control population and for pupils in the receiving schools as well. Subsequent assessments, during the fall and spring of the following school year, provided a wealth of data bearing on early impact of the transfer. These data, reflecting achievement and performance in the school setting, motivational and emotional characteristics, attitudes and social relationships, can be brought to bear on many unanswered questions about the consequences of desegregative action. They serve to define a wide spectrum of potential early outcomes that might be anticipated by other communities adopting this general approach to desegregation; their implications may well extend to other desegregation efforts as well.

Chapter 2

RELATED RESEARCH

In 1965, the time this project was in the planning stage, limited research evidence was available as to the effects on children of school segregation and/or desegregation. That evidence, which provided background and direction for the present study, is reviewed in the first major section of this chapter. As with the evidence presented in support of the 1954 court decision on school segregation, conclusions were largely inferential and could be challenged for the absence of "hard" and directly relevant data. It was this circumstance that provided the major impetus for the present study, in which it was hoped that the data gathered would be pertinent not only to the local situation but also to other districts confronting problems of racial imbalance.

Since 1965, interest in this area as a research problem has increased, and reports on several desegregation projects have appeared. While no study of similar focus and dimensions has yet been completed, at least one is underway which resembles the current study in many respects. During this period, likewise, evidence has begun to accumulate as to the effects of compensatory education, which has been widely regarded as a promising intervention strategy and, in some quarters, as a preferred alternative to the artificial establishment of racial balance within schools. Finally, the past few years have brought further documentation, in two important pieces of research, for the plight of the black child and for those factors that limit or influence his response to the educational process. These three areas of inquiry, from the wealth of recent research dealing with the broad question of minority-group education, will be highlighted in the second major section of the chapter.

It should be noted that this review by no means exhausts the available literature on Negro-white differences which relate to, or may influence, educational outcomes. Nor are interacting situational factors examined in depth, except as they have operated in the desegregation programs described here. The reader who wishes to pursue these kinds of questions further is referred to the extended bibliography appearing at the end of this report.

1. Research Prior to 1965: Foundations for the Present Study

That the inferior status accorded the Negro in this country has had serious consequences for his personal development has been amply demonstrated. The accumulated evidence, reviewed in several publications (e.g., Anastasi, 1961; Ausubel, 1956; Clark, 1963; Dreger & Miller, 1960; Klineberg, 1944), indicates that the Negro child assimilates the cultural stereotypes associated with his race at an earlier age than the white child; that the Negro child responds with deep feelings of inferiority and humiliation when confronted with reinforcement for these stereotypes in discriminatory practices; that he experiences confusion about his personal worth, giving rise to frustration, conflict, and an attitude of hopelessness. All of these findings point to a restriction of the Negro's potential for constructive accomplishment, which in turn perpetuates his inferior status.

The extent to which this dilemma may be aggravated by school segregation is not readily determined. It is clear, however, that the educational insufficiencies so prevalent in segregated Negro schools (NAIRO) Commission on School Integration, 1963; U.S. Commission on Civil Rights, 1961) have done little to combat the problem. Indirect evidence suggests, moreover, that the fact of segregation, in itself, is damaging. From a number of studies, Anastasi (1961) has inferred that the inherent inequality of separate education lies in its symbolism of implied inferiority and the consequent undermining of self-confidence, motivation, and achievement on the part of the Negro pupil; further, that in isolating the Negro from the dominant subculture, segregation serves to widen the gap that separates him from the cultural mainstream.

Nor, apparently, is the white child unaffected: Clark (1955) cites conflict between teachings of democratic principles and confrontation by evidence of discrimination as evoking a variety of maladaptive responses in majority-group children (e.g., guilt feelings, rejection of authority, extreme conformity). Despite the inferential nature of the evidence which supports such judgments about the effects of segregation, they are sufficiently dramatic in their implications to warrant serious attention.

Effects of School Desegregation: Early Studies

If segregation *per se* impairs the Negro's ability to profit from school experience, does impairment tend to dissipate following desegregation? Are self-confidence, motivation, and achievement augmented? If it is the task of education to attempt to combat the inequalities imposed on the Negro by society at large, does biracial school experience help to bolster self-esteem, dispel hopelessness, overcome cultural differences between the Negro and the more priviliged majority?

With the passage of fifteen years since segregation was outlawed by the Supreme Court, these are questions to which some answers, at least, might reasonably be expected. The fact is, however, that reports published prior to 1965 on the consequences of school desegregation captured a wealth of opinion but little objective evidence. This fact is recognized in a review by Katz (1964), who has brought together a considerable amount of experimental research not directly concerned with, but having implications for, desegregation. The research presented, drawing heavily on laboratory studies of college students, points up both positive and negative influences on Negro performance in predominantly white settings. Subjective feelings of inferiority and/or evidence from past accomplishments, on the part of the Negro, are likely to generate low expectancy of success in the racially mixed classroom. This, in turn, can be expected to reduce motivation to achieve (Atkinson, 1958a, 1958b) and, if academic failure carries the threat of disapproval by parents, teachers, or classmates, to produce emotional responses -- fear, anxiety, anger, humiliation -- which are detrimental to performance (Sarason, Davidson, Lighthall, Waite, & Ruebush, 1960). On the positive side, results suggest that acceptance by white peers and adults can be expected to facilitate learning: if academic success promises approval by whites, motivation to achieve is likely to be enhanced (Dittes & Kelly, 1956).

The above implications from laboratory research, which Katz uses as points of departure for considering desegregation, are evaluated in the current research. By examining the effects of desegregation on both achievement and motivational-emotional factors, for example, we have attempted to extend the thinking of Atkinson and Sarason into the desegregated school setting.

Prior to 1965, studies dealing directly with the effects of desegregation were rarely systematic. There are rich descriptive accounts (e.g., Bard, 1958; Valien, 1956; Williams & Ryan, 1954). There are surveys of opinion, such as that described by Levenson (1965) indicating widespread belief, among 3,000 interviewees, that Negro pupils transferred to predominantly white schools experience confusion, frustration, and insecurity. There are summaries of interview data obtained from desegregated Negro pupils, their families, and/or school personnel (Coles, 1964; Dyer, 1960; East Harlem Project, 1961; Wertham, 1953). While these reports are of interest in revealing the perceptions of those close to desegregation, the findings cannot be taken as objective evidence for its effects.

Other limitations are found in most of the studies which have incorporated some systematic measurement. Hansen (1960) and Stallings (1959) have presented data showing general improvement in achievement following the institution of voluntary transfer plans in the public schools of Washington, D. C., and Louisville, respectively. On the basis of the discrepancy between white and Negro achievement before desegregation, the general rise in achievement thereafter (not separately reported for Negroes and whites), and the steadily increasing percentage of Negro pupils in Washington schools, Hansen concluded that Negro pupils performed better, and white pupils at least as well, following desegregation. It is doubtful, however, that improvement can be attributed to desegregation in any direct sense, inasmuch as the simultaneous adoption of a four-track system of homogeneous ability grouping tended to minimize interracial contact. Moreover, given the gross inadequacies which Hansen reported for Washington's Negro schools prior to desegregation, and the dramatic improvements which accompanied consolidation of the Negro and white divisions, it seems probable that the achievement gains stemmed from the general upgrading of the educational program, rather than from desegregation as such.

The Louisville findings seem to reflect a similar situation. Stallings compared achievement test scores for pupils enrolled in grades 2, 6 and 8 the year before desegregation with scores for pupils in those grades the following year. He found significantly greater achievement in the latter group, for both whites and Negroes, and relatively greater "improvement" in Negroes than whites. Stallings did not report comparative data for Negro pupils who transferred to formerly white schools and those who elected to remain in segregated schools. A further analysis by Knowles (1962), however, shows that Negro pupils remaining outperformed their counterparts in predominantly white schools. Thus, improved performance by

Negro pupils appears not to have resulted from desegregated educational experience. With a general rise in achievement apparent in Louisville, as in Washington, improvements in the educational program, coinciding with desegregation, seem to be implicated here as well.

A third study of pupil achievement following desegregation was conducted by Wolman (1964), two years after voluntary transfer from New Rochelle's celebrated Lincoln School. Wolman examined reading achievement in four groups of elementary pupils; Negro transfer pupils, Negro pupils remaining at Lincoln, pupils from a predominantly white school of similar socioeconomic level, and white pupils from an exclusively white school in an affluent area. Results showed no significant differences in reading scores for the first three groups, all of whom scored significantly below the affluent white group. Examination of reading readiness scores for kindergarten pupils, however, revealed that the transfer pupils significantly outperformed the two socioeconomically comparable groups, suggesting that the impact of biracial education may be greater at an early age. Wolman considered the findings generally encouraging, noting that despite the factors militating against success for the transfer pupils, these pupils were able to maintain an achievement level at least comparable to that of the nontransferred pupils. The findings bear cautious interpretation, however; in the absence of pretransfer data on these pupils, the effects of the transfer itself remain obscured.

One last study deserving mention is the doctoral research carried out by Samuels (1958) at the University of Indiana. Samuels compared achievement test scores of Negro pupils in desegregated classes with scores of white pupils in those classes, and of Negro pupils remaining in segregated classes. The groups were matched for intelligence, preschool readiness, socioeconomic status, school attendance, and health, on the basis of information obtained from school records. Results showed that the desegregated Negro pupils achieved significantly less well than the white pupils, especially in the language arts, and that their performance was inferior to that of segregated Negro pupils, as well, in grades 1 and 2. Contrary to Wolman's findings, however, desegregated Negroes outperformed segregated Negroes in other elementary grades. Samuels also reported that differences between Negro and white pupils had increased at the end of the first year of desegregation but tended to decrease or stabilize by the end of the second year.

Full details of Samuels' study could not be obtained, and two important questions are not answered in the published abstract: the extent to which desegregation was accompanied by other changes in the school program (as in Washington, D.C., for example), and the extent to which initial comparability was demonstrated for Negro pupils who elected to transfer and those who did not -- a critical point for interpreting subsequent differences in achievement.

With these reservations, however, Samuels' study appears to be the earliest published research which comes close to meeting the optimum conditions for assessment of the effects of desegregation: (1) utilization of appropriate comparison groups -- not only white classmates of the desegregated Negro pupils, but Negro pupils continuing in seggegated classes, if such conditions obtain; (2) pre- and post-desegregation measures on both Negro and white pupils involved; and (3) appropriate attention to factors which, if uncontrolled, are likely to contaminate results. With achievement the focal concern, as in the studies reviewed here, failure to take account of differences in scholastic aptitude and socioeconomic status, at the very least, clouds the interpretation of results, as does disregard for important concomitants of desegregation, e.g., the upgrading of the educational program undertaken simultaneously in many communities.

Bearing in mind the limitations of these studies, they seem to show that desegregation has not been detrimental to achievement of white pupils, but they must be considered equivocal as to its effects on Negro achievement. They point particularly to the likelihood of differential effects on pupils of different ages and at different points in time following intervention, although the nature of these differences remains to be clarified. Importantly, however, these studies have dealt with highly selective samples of Negro children (i.e., voluntary transfers), and they have not gone beyond the achievement variable to attempt measurement of motivation, emotional factors, peer acceptance, and the like, which, from the evidence presented by Katz (1964), may be particularly critical determinants of Negro achievement in racially mixed classrooms.

This, then, was the state of the field at the time the Ann Arbor desegregation program was instituted, and the present study conceived.

2. Research Since 1965: Some Answers, Some Questions

Both prior to and since 1965, some have advocated compensatory programs for ghetto children as an educational solution preferable to the efforts and adjustments necessary to accomplish desegregation. In predominantly Negro communities, such programs have seemed the only hope.

In the four years since the present study was begun, preliminary evaluations of many compensatory projects have been completed. By most indications, these programs -- sponsored by a variety of sources, but primarily by the federal government -- have done little that is measurable toward alleviating the problems associated with segregated education. A major finding of the U.S. Civil Rights Commission's most recent report Racial Isolation in the Public Schools (1967) is that compensatory programs in majority-Negro and lower-class schools have had no lasting effect in improving student achievement. A recent report to the Commission (Gordon and Jablonsky, 1967) notes that while a few program models show promise, existing programs have failed to promote significant achievement differences between participants and controls. In The Shape of Education (1968), former President Johnson's National Advisory Council on the Education of Disadvantaged Children notes the dangers of substituting compensatory programs for effective racial desegregation: the two strategies were meant to complement one another, not to occur in isolation. The evidence available to date would seem to support the wisdom of this observation, with respect to compensatory programs.

Perhaps the most important and controversial piece of research yet published on the problem of Negro education is Coleman's Equality of Educational Opportunity survey (1966). This massive report to the U.S. Office of Education documents the existence of between-school differences in majority-race schools. While differences in performance exist between majority-Negro schools in different geographical areas (e.g., urban North vs. rural South), achievement in predominantly Negro schools was found to be poorer than in majority-white schools within geographical areas; school "input" (books, laboratories, quality of teacher preparation, etc.) was found to be less than for majority-white schools; and Negro pupils' sense of control of their environment was found to be significantly less than that of pupils in predominantly white schools. In addition, Coleman found that in most areas of the country, the achievement gap between Negroes and whites tends to widen with the years spent in school.

Family background, according to Coleman's data, accounts for the greatest amount of between-schools variance in achievement. Negro pupils tend to come from less advantaged homes which do not prepare them as adequately for school experiences; hence, majority-Negro schools tend toward lower achievement levels, reflecting the lesser preparation of their students to respond adequately in an academic setting.

A reanalysis of the Coleman data, presented in the 1967 U.S. Civil Rights Commission report referred to above, indicates that racial separation in America's public schools is increasing, that the social class of a child's schoolmates is an important factor in his own achievement and attitudes, and that social class composition of a school, quality of teaching, and school "input" make more difference to a disadvantaged child than to a middle-class child. Predominantly Negro schools are, in addition, generally regarded by the larger community as inherently inferior institutions.

A primary and widely debated finding of the Coleman study is that attributes of fellow pupils account for far more variance in the achievement of minority-group children (except Orientals) than do school facilities, and slightly more than do attributes of staff. Generally, the higher the levels of educational aspiration and background of fellow pupils, the greater the achievement of minority children, irrespective of their own background characteristics. On the other hand, the achievement of white and Oriental pupils shows far less dependence on characteristics of their classmates, suggesting a lesser "sensitivity" in these children to school environment. Coleman suggests that perhaps this can be attributed to an educationally strong family background in which great value is placed on learning.

The racial composition of schools likewise relates importantly to achievement. Generally, according to Coleman's data, the greater the proportion of white pupils in a school, the greater the achievement of pupils in each racial group, and this finding is not accounted for by better facilities and curriculum in schools with largely white enrollments. The relationship of racial composition to pupil achievement is in large part a function of racial differences in educational background and aspiration. From the reanalyses presented in the 1967 Civil Rights Commission report, however, the relationship is not eliminated by taking into account differences in social class.

The Coleman report has been subject to criticism on many counts, from the statistical methods employed to the criteria used to define teacher quality. Its fundamental limitation is however, that it is what it is: a cross-sectional survey rather than a longitudinal one. Thus, the report cannot be said to offer evidence that desegregation *per se* improves achievement of minority-group pupils transferred to majority-white classrooms; it merely suggests that this could be so. The report is, nonetheless, a milestone in describing educational conditions as they existed in this country in the mid-sixties, and in laying foundations and pointing directions for needed research.

McPartland (1968), in a further analysis of Coleman's data for Negro secondary students in the metropolitan Northeast, examined student achievement in relation to a variety of situational factors believed to hold potential for influencing change in racially mixed schools. Student environment -- and especially racial composition of the student body -- proved to be a major factor in Negro student achievement. Negroes in integrated schools generally achieved at higher levels than those in segregated schools, but this effect appeared to be largely a function of integregated classroom experience: Negro pupils segregated in classes within racially mixed schools showed no benefit in terms of achievement. Other situational factors associated with school-to-school differences in Negro achievement were the social stigma pupils felt to be associated with their schools, and the degree of social integration present.

Related findings of interest include the observation that differences in Negro pupils' sense of opportunity closely parallel differences in the racial composition of classes, suggesting that feelings of inferiority and defeatism may be somewhat lessened by the experience of integrated schooling. Finally, social integration within racially mixed schools was found to be the major factor in school-to-school differences in racial attitudes.

McPartland's study, like the Coleman report, deals with relationships between factors observed across schools at a single point in time. Although the language of his report is sometimes confusing in this regard, his study does not examine changes occurring after intervention of some kind. His findings do, however, have interesting implications for school organization. For example, the widespread practice of grouping or tracking pupils for instruction, on the basis of prior achievement levels, would appear potentially detrimental to the educational process generally, and to the achievement of those assigned to lower tracks or remedial groups in particular, since in racially mixed schools, the net result of such grouping may well be an effective segregation of pupils by race.

Effects of Desegregation: 1966-1969

The past few years have generated detailed reports on several desegregation projects in public schools, and a limited amount of information on others now underway. The latter are not treated here; some have not yet reported findings, and the early reports of others lack sufficient information to judge the adequacy of even tentative conclusions. Collectively, however, they appear to be equivocal as to the effects of desegregation (Matthai, 1968).

Five major school districts have prepared extensive reports on early findings from their desegregation programs, all of which involve busing. Most have emphasized scores on standardized achievement tests as the sole outcome measure, and in none of the studies were data systematically available for all pupils prior to institution of the program. Nonetheless, these studies reflect in varying degrees greater sophistication than those reviewed from earlier years, and they warrant consideration.

Project Concern, instituted in the public schools of Hartford, Connecticut in 1966, is unique in its effort to examine separately and in combination the effects of desegregation and of compensatory education. This project involves voluntary busing of 266 inner-city children who were randomly assigned to available space in five Hartford suburban school districts. The transfer group consisted of randomly chosen classes of elementary pupils (grades K-5) from schools with nonwhite enrollments of at least 85 percent. Control classes of comparable IQ were identified within the same schools, at the same grade levels. Special supportive services were provided to part of the students in each group, creating a four-cell division of pupils: those who were bused and given special instructional help, those bused without special help, those given special help in their original inner-city schools, and those who remained in the inner-city schools without special help. Children were pretested shortly after institution of the busing program, and were retested at the end of that school year and the next one.

A report by Mahan (1967) presents preliminary findings for the first year of the Hartford transfer. The clearest and most consistent picture emerged for the youngest group of children: among kindergarten pupils, the greatest growth in cognitive functioning and in "school skills" (e.g., alphabet, numbers, matching, etc.) occurred among children placed in suburban schools, and particularly when such placement was accompanied by special supportive services. On none of the measures employed did kindergarten pupils remaining in the inner-city schools outdistance their bused counterparts. And at all grade levels, children who were both bused and provided with special services significantly outperformed the other three groups. The value of desegregated schooling without special help was not, however, demonstrated consistently across grades, although the small number of pupils in the bused-nonsupported group (5-11 per grade) limits generalization on this question. Neither did compensatory programs appear to enhance the performance of pupils remaining in the inner-city schools, although a somewhat different structure for compensatory services to bused and nonbused children presents some difficulties for interpreting the value of supportive help as such.

While scholastic aptitude and achievement were focal points in the Hartford study, Mahan reports other preliminary findings which are of interest: (1) all but 12 of the families invited to participate in the busing program elected to do so, and only 12 pupils subsequently dropped out, the largest number kindergarten and first-grade children whose parents found the program inconvenient; (2) absences were no more prevalent in the bused group than among children remaining at inner-city schools, although problems of chronic absenteeism were somewhat more frequent in the former group; (3) suburban teachers reported that the bused children fitted in well, adjusted quickly, and responded positively to high academic expectations; (4) anxiety, as measured by the Sarason scales (1960), did not increase among bused children, nor was there a higher incidence of behavior problems or school failure in that group; and (5) participation in school-sponsored activities was consistently high for bused pupils and their parents, with 92 percent of the parents involved in some such activities in the suburban schools and 70 percent of the pupils participating to some degree in extracurricular activities.

Mahan is careful to point out several limitations in the Hartford study. Two have already been noted here: the question of equivalance of supportive services offered to bused and nonbused pupils; and the small number of pupils comprising the bused-non-supported group. The most serious limitation, perhaps, lies in the substantial amount of missing data, due to absences and inadequate checks and controls on the part of the independent agency responsible for data collection. Thus, while nearly all of the children who began the program remained as participants at the end of the first year, pre- and posttest data were available for many fewer pupils -- generally more than half the sample at each grade level, but in one instance only 13 percent. Group means were substituted for missing values, to stabilize sample size, but where the means themselves are based on only a few cases, the possibility of distortion is considerable. In the one extreme case, WISC pre- and posttest scores were available for only seven pupils, divided between the supported and nonsupported groups.

A fourth limitation emphasized by the author, and one whose importance should be underscored, is that the report covers only a single year's observations and cannot, therefore, be presumed to answer definitively questions about the potential impact of desegregation. Two additional limitations should be noted. First, the busing program was already in effect when the initial measures were collected. Except for the nonbused-nonsupported pupils, then, what purports to be baseline data may, in fact, be contaminated in some undetermined fashion by pupils' early reactions to new school experiences. Such reactions might be expected especially among the bused pupils. Finally, it must be borne in mind that the Hartford busing program was voluntary. Whether those who volunteered can be regarded as initially comparable to those who were not offered an option to transfer, is not known.

A pilot program to desegregate the Syracuse Public Schools has been described by Beker (1967). This project involved reassignment and compulsory busing of white and Negro pupils from an elementary and a junior high school that were closed. As with the Hartford study, baseline data were collected at the beginning of the year the program was implemented; pupils were retested at the end of that school year.

Gains reported in the Syracuse study were most marked for first-grade transfer pupils. In general, Negro transfer pupils at this grade level began the year with reading readiness scores considerably lower than those of their middle-class schoolmates, but closed the gap by the end of the year. At third grade, reassigned pupils showed a slight but generally consistent tendency toward greater progress than their inner-city counterparts. At upper elementary levels, however, the reassigned pupils tended to begin the year with lower test scores than their middle-class peers, to gain less, and to finish the year further behind.

On sociometric measures, the overall tendency was for white resident children to be chosen more frequently by their classmates, and for Negro newcomers to be "underchosen." However, second-grade Negro boys gained significantly on the sociometric posttest, in being more often chosen as "best friends" by white girls. At one school, also in second grade, white neighborhood children of both sexes chose significantly more bused Negroes of their own sex on the posttest.

The Syracuse study reflects the problem of attempting to carry out research designed for an action plan that is subsequently altered in a number of ways. Certain data were not gathered as originally planned, and numbers of children involved in the transfer were ultimately much smaller than anticipated. At some grade levels, pre- and posttest scores were available for only two or three transferred students, and generalizations must be limited accordingly.

In 1964, the Philadelphia Public Schools began busing Negro elementary pupils from an overcrowded inner-city school to two predominantly white schools attended by children of above-average ability, achievement, and socioeconomic status. Reading and arithmetic scores were examined over a two-year period for bused pupils, for those remaining at the sending school, and for those from the receiving-school neighborhoods.

According to a report by Laird & Weeks (1966), bused pupils tended to perform better in both reading and arithmetic than was expected on the basis of ability level. In reading, this effect was more pronounced for younger pupils (those first bused in grades 2-3) than for older pupils (those in grade 4 when the program was instituted). In arithmetic, this trend reversed: the youngest group performed as predicted, while the two older groups exceeded predicted performance levels. Receiving-school pupils exceeded predicted performance to about the same extent as bused pupils, with the greatest gains accruing to the two younger groups. Pupils remaining at the sending school performed about as expected at all grade levels.

While no child's academic performance appeared to suffer as a result of the Philadelphia busing program, the positive effects reported for the busing are difficult to appraise. Bused children were volunteers, and had considerably higher IQ's, on the average, than their nonbused counterparts. Within the bused group, however, no clear relationship was demonstrated between IQ and the effects of busing: bused children at different IQ levels appeared to gain about equally in achievement.

The racial balance plan implemented in White Plains, New York, is described in a report by Graves & Bedell (1967). This plan involved the closing of a predominantly Negro elementary school and reassignment of its pupils to four essentially white and two integrated schools. As part of this program, another group of pupils from an integrated neighborhood was reassigned to a predominantly white school.

Standardized test scores for children transferred as third-graders in 1964 were compared with scores for 1960 third-grade pupils from the same inner-city school. When these groups were followed for a two-year period, it was found that nearly half the transfer pupils demonstrated achievement gains of two or more years, as compared to a fourth of the pupils in the 1960 group. Inner-city children who were transferred as first graders were found to be achieving as well as or better than those transferred as third-graders. School officials interpret these findings as suggestive of a gradual closing of the gap between "normal" school achievement and the typically poorer achievement of inner-city children.

Similar comparisons of pupils in the receiving schools with their 1960 counterparts indicate that their achievement has not been adversely affected by implementation of the racial balance plan. Indeed, achievement appeared to be greater for this group, in some respects, than for the 1960 group from the receiving schools.

The improved achievement of both transfer and receiving-school pupils, when compared with their counterparts in prior years, bears cautious interpretation. On the whole, children enter school with increasingly better preparation as the years pass. Educational programs, too, are continually being altered and refined in the interest of greater effectiveness. Thus, to attribute the differential achievement of present and prior groups to a specific intervention (the racial balance plan) is hazardous, particularly without evidence that the greater growth is unique to the schools involved.

Other findings of interest from the White Plains study include parent and teacher reactions to the transfer. Parents viewing the program as having had positive effects on their children outnumbered by more than two to one those reporting negative effects. About a third of the parents felt their children had not been affected one way or the other by the program, while a few saw both positive and negative consequences. The greatest concern about negative consequences occurred among parents from newly integrated schools. Positive response was greatest among inner-city parents, a majority of whom reported improved achievement and behavior in their children. Positive reactions on the part of receiving parents, on the other hand, focused on improved relationships between children, and improved understanding of children from different backgrounds. A similar survey of teacher reaction indicated that a majority of teachers saw both positive and negative consequences for pupils; a fifth saw the program as having a consistently positive effect, about half that number viewed it negatively, and a few felt it had made no difference. Positive consequences seen by teachers included improved achievement, aspiration, and peer relationships, as well as development of an awareness of, and respect for, differences in one's classmates. Negative responses concerned the transfer pupils' frustrations in trying to "keep up" with higher-achieving classmates, resultant discipline problems, the fear that achievement of white pupils would suffer because so much of the teacher's time was required by the transfer pupils, and the possible isolation and labeling of the transfer group, distinguishable by virtue of riding the bus to school, and by generally poorer achievement. Finally, it is of interest that contrary to predictions by opponents of the program, institution of the White Plains racial balance plan did not result in an out-migration of white pupils from the receiving schools.

The last public school desegregation study to be looked at is the joint project of California's Riverside Unified School District and the University of California at Riverside. This study, the most extensive reported to date, approaches most closely the experimental design of the present study. Participating are approximately 1000 minority-group pupils (Mexican-Americans and Negroes, in the ratio of about 3 to 2) whose progress, along with that of white receiving-school pupils, is to be followed for a period of seven years.

The Riverside program involved phasing out 3 segregated elementary schools and busing those pupils to 12 predominantly white schools. Desegregation was accomplished gradually, beginning in the fall of 1965; the last of the pupils were desegregated in the fall of 1967. A combination of circumstances ruled out the collection of pretransfer data in 1965, but extensive data were gathered beginning in the spring of 1966.

According to a preliminary report on pupil achievement (Purl, 1967), ranges of test scores were initially similar for desegregated and receiving-school pupils, but the former group included a much greater proportion of low-achieving children. In the spring of 1967, the progress of transfer pupils was found to be about half that which would be expected on the basis of test norms. Achievement gains for these pupils were consistently small from grade 1 to grade 2, and from grade 2 to grade 3, with a single exception: those children who had experienced two years of desegregated schooling by the end of third grade demonstrated considerably greater growth during that year than any other group. It was suggested, on the basis of this finding, that the benefits of desegregation may not be immediately reflected in achievement-test performance.

It was also observed that the achievement of transfer pupils differed according to the achievement level of the children with whom they were grouped. Those who were dispersed a few to a class outperformed their counterparts who were clustered together in one or two classes in the receiving schools. Moreover, pupils integrated into high-achieving classes made greater progress than those who joined classes of more average achievement levels. As in other studies reviewed here, no evidence was found to suggest that the achievement of white children was adversely affected as a result of the desegregation program.

A more recent report from Riverside (Purl & Dawson, 1969), incorporating 1968 data, suggests that one to three years in desegregated schools has had little, if any, demonstrable effect on the achievement-test performance of either minority or white pupils. The initial gap in achievement between the two groups has continued to widen as pupils have progressed through the grades, paralleling the national pattern described by Coleman *et al.* (1966).

It is interesting to note that the achievement of both groups has been consistently higher in some receiving schools than in others. Social-class differences between receiving schools are believed to be the primary factor in the differential achievement of white pupils, and they may well be a factor in the achievement patterns of minority-group pupils assigned to different receiving schools. This is suggested by substantial correlations between the average test scores of transfer and receiving-school pupils, lending some support to the Coleman finding concerning the importance of student-body composition to minority-group achievement. Factors other than social class are yet to be examined in relation to school-to-school achievement differences; these include the effects of participation in preschool programs, the influence of older siblings attending integrated schools, and differences associated with sex and ethnic background. The last will be particularly important for those concerned with Negro achievement; the fact that a majority of Riverside's transfer pupils are Mexican-American children rules out any conclusions about the performance of Negro children at present.

Assessment of achievement in Riverside pupils, via annually administered standardized tests, has been the primary task of the public schools. An equally important part of the Riverside study, for which University members of the research team have had major responsibility, concerns the assessment of a host of other pupil characteristics. A detailed description of these additional measures is available elsewhere (Carter, Gerard, and Mercer, 1967); included are such things as achievement motivation, anxiety, personal aspirations, emotional adjustment, and attitudes toward self, school, and relevant ethnic groups. Further, family interviews have generated information about parent attitudes toward school and toward integration, parent aspirations for themselves and their children, and so on. Reports on these data are not yet available, and they may be critical to an ultimate judgment about the program. If future achievement data, and the further analysis of present data, confirm the "doesn't hurt, doesn't help" pattern that appears at first glance to characterize the first few years of desegregated schooling in Riverside, it may well be that decisions as to the value of this intervention strategy will rest largely on the demonstrated presence or absence of other positive benefits to the children involved.

The five desegregation reports reviewed above are either preliminary and their conclusions tentative at this time, or their data limited in other ways. They do, however, point some general directions which need further exploration. Desegregation, if it has any effect on the achievement of minority-group children, appears to hold the greatest promise for children whose exposure to desegregated schooling occurs at an early age. Classroom desegregation seems to be important -- the dispersion of minority-group pupils among many classrooms rather than concentration of substantial numbers within a class. Supportive services to newly desegregated pupils may be an important factor in subsequent achievement. Finally, contrary to the concern sometimes expressed by parents and teachers, achievement of white neighborhood children has not suffered as a result of attending school with less advantaged minority-group children.

The question of other benefits claimed for desegregated education -- improved self-concept in minority-group children, for example, or the fostering of more positive relationships between members of different racial and ethnic groups -- has not yet been answered with "hard" data. And, as noted in conjunction with the Riverside study, these answers appear to be increasingly important, in the absence of definitive evidence that the measured achievement of minority-group pupils is greatly enhanced by programs of school desegregation. Also unanswered, in the research reported to date, is this further question: what are the characteristics of those children who do show improved achievement following desegregation, relative to those who do not?

St. John (1968), reviewing minority-group performance under various conditions of school ethnic and economic integration, concludes with this hypothesis: "...that the relation between integration and achievement is a conditional one: the academic performance of minority group children will be higher in good integrated than in good segregated schools, providing they are supported by staff and accepted by peers," (p. 2). This seems to be another way of saying that desegregation can mean many things. Simply putting children together in a physical facility may do little more than point up inadequacies and reinforce barriers. It seems a reasonable assumption that the school can be an effective agent for academic and social progress only if it consciously sets out to create a climate for involving everyone -- parents, staff, and children -- in fulfilling the meaning of democracy.

Chapter 3

METHOD AND PROCEDURES

In this chapter are described the general design of the present study, the populations and samples, the data collected, instrumentation, and data analysis.

1. General Design

The design of the study is straightforward, involving pre- and posttransfer data on (1) the pupils to be transferred, (2) a population of nontransferred pupils from a nearby school enrolling about equal numbers of Negroes and whites, and (3) pupils in receiving schools.

Extensive data were collected on these pupils, in an effort to span a wide range of characteristics and attributes which may affect, and/or be affected by, the transfer. These data, obtained from a variety of sources, were collected prior to the transfer (spring 1965) and at the end of the first posttransfer year (spring 1966). In addition, a circumscribed interim assessment was carried out soon after the transfer (fall 1965) to provide data on immediate and perhaps transitory effects.

It should be noted that follow-up data on the transfer students reflect not only the consequences of a radical change in racial composition of the classroom, but also the novelty of attending a different school and, for most pupils, the new experience of being bused to school. Some degree of novelty, apart from altered racial balance, is inherent in any desegregative action, and its reflection in data relating to the early effects of desegregation is therefore inevitable. Interpretative difficulties arise, nonetheless, as the number of novel elements increases, particularly when these elements are external to the process of desegregation and capable of exerting independent influence on the pupil characteristics to be studied. For example, as noted in an earlier section, it has been difficult to appraise the role of desegregation in improved achievement reported by communities in which desegregative action has been accompanied by the simultanious introduction of sweeping improvements in the educational program.

Such elements were not present to any appreciable degree in the present desegregation program. Given the very small classes and the intensive special services provided in the ghetto school during the year preceding the transfer (see Appendix A), it is clear that any posttransfer gains found for this group cannot be attributed to program improvement coincidental with the transfer. Transfer pupils became members of larger classes in the receiving schools, and despite the provision of some extra help to those schools, the level of intensive special services provided to these pupils during the final pretransfer year could not be maintained in the receiving schools. Thus if program change exerted any systematic influence here, it is most likely to have operated in a negative fashion.

2. Populations and Samples

Transfer Group

The transfer group consists of all pupils who were enrolled in kindergarten through grade 5 at Jones elementary school during the final months of the 1964-65 school year, at the end of which time that school was closed. Sixth-grade pupils were not included inasmuch as their move the next year, to junior high school, was a natural one. The transfer group initially included 165 pupils (31 whites, 132 Negroes, 2 other nonwhites[1]). Of these, 131 remained as transfer pupils at the end of the first year of reassignment.

The original population was not a large one, and it was predictable that some shrinkage would occur over the course of the study as a result of natural turnover. It was not anticipated that such shrinkage would greatly affect the representativeness of the sample remaining. Reduction in the size of the group was of concern, therefore, only insofar as the number of cases in some instances might become too small to permit generalization from the data.

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[1] These two pupils, along with their counterparts in the nontransfer and receiving-school groups, were subsequently excluded from analyses of the data. They could not appropriately be included in either the white or Negro groups, and their number was too small to warrant treatment as a third racial group.

Nontransfer Group

Also studied was the population of Mack elementary school, whose attendance area borders the Jones School district and whose Negro enrollment, like that of Jones School, had been climbing steadily for several years. In 1965, Negro children comprised 48 percent of the Mack population; that figure has since risen to 52 percent.

This population was included in the present study for two reasons. First, given a Negro-white ratio second only to that of Jones School, Mack School was considered the next target for action to correct racial imbalance. Collection of broad data on this population was seen as clarifying the existing situation at Mack School and as laying a foundation, perhaps, for the study of subsequent intervention.[1] Secondly, the Mack population, similar to the Jones population in many respects, was not to be reassigned or subjected to any other radical change (in program, racial balance, or whatever) during the year of the study. It appeared, then, that a matched control group might ultimately be identified within the Mack population, such that comparisons with the transfer group might help to pinpoint changes in the latter associated with the transfer per se. It was recognized that Negro-white ratios of 1-to-1 (Mack) and 3-to-1 (Jones) are not the same, and that pupils from these two schools had not, therefore, had equivalent experiences with respect to racial balance in the classroom. An important common denominator existed, however, in the fact that Negro pupils in these two schools, unlike those in all other local schools, did not constitute a racial minority group in the classroom. Since a shift to minority-group status was at issue in the transfer of Negro pupils from Jones School, comparisons with pupils from Mack School seemed appropriate.

The intent was to select a sample from Mack which would reflect the age, grade, sex, socioeconomic status, and racial composition of the transfer group, and which would be equivalent to the latter in initial IQ and reading achievement. Selection of the sample was to occur at the end of the posttransfer year so that comparability of the transfer and nontransfer groups would not be affected by interim losses from either population.

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[1] Several plans have since been proposed to reduce drastically the Negro enrollment at Mack School. Community response to these proposals has been mixed, and no intervention has yet occurred.

As the first step in this process, relevant baseline data for the two populations were examined within the race-sex groupings to be applied in all analyses of the data (i.e., white boys, Negro boys, white girls, Negro girls). Such differences as did appear tended to favor the Mack pupils, but differences were rarely greater than would be expected by chance. No consistent pattern of significant differences was found on any of the criterion measures to be used in matching. The one area of possible concern was socioeconomic status, as reflected in the principal breadwinner's occupation and education. Here, white pupils at Mack showed a statistically significant advantage over white pupils at Jones. This difference did not hold for Negro pupils, however, who accounted for 80 percent of the transfer population and were, of course, the critical group to be studied.

It appeared, therefore, that comparisons could legitimately be made between the transfer and nontransfer populations without selecting a matched sample from the latter group. Treatment of the Mack population as a whole offered certain advantages, likewise, in simplifying the analysis of data and in providing descriptive information of greater local utility than that from a selected subset of pupils.

The nontransfer group, then, consists of all pupils who were enrolled in kindergarten through grade 5 at Mack elementary school during the final months of the 1964-65 school year. The group initially included 490 pupils (212 whites, 195 Negroes, 2 other nonwhites). Of these, 319 were still attending Mack School at the end of the following school year.

Receiving-School Samples

In May of 1965 the six receiving schools, serving predominantly white middle-class residential areas, had a combined population of 2,222 pupils in kindergarten through grade 5. A breakdown by race showed 2,159 whites (97.2%), 51 Negroes (2.3%), and 12 other nonwhites (0.5%).[1] This population was sampled in two ways, corresponding to the somewhat different purposes to be served by pre- and posttransfer data on receiving-school pupils. Pretransfer data served primarily to define the characteristics of this population as a whole, as a basis for determining initial differences between its pupils and the incoming transfer pupils. Posttransfer data, on the other hand, had to provide for the reflection of mutual influence and interaction between these two populations.

Two alternatives were considered for obtaining baseline data on the receiving-school population: the collection of all special data on a random sample of pupils, and the collection of partial data on all pupils, the parts to be randomly assigned. The former alternative was rejected as not administratively feasible, and perhaps more difficult to justify to parents than a procedure which would involve all pupils.

Accordingly, a "test-sampling" procedure was adopted which allowed each pupil in the receiving-school population to be represented in the pre transfer data by test scores and ratings from some, but not all, of the instruments employed.

The test battery was divided into six "segments," each containing about a third of the instruments in various combinations. This procedure was carried out separately for each grade level, since some instruments (e.g., questionnaires, reading readiness tests) were not applicable across the entire range of grades. The segments were constituted in such a way that (1) each instrument was represented in a minimum of two segments, assuring its administration at the designated grade level in at least two of the six receiving schools, and (2) each instrument was paired with every other instrument at least once in every two consecutive grades (i.e., K-1, 2-3, 4-5), making possible a determination at

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[1] For the individual receiving schools, total enrollment in grades K-5 and percentage of Negroes and other nonwhites, respectively, were as follows: Allen School, 387, 0.2% and 1.8%; Bach School (contiguous with the Jones district), 429, 8.6% and 0; Dicken School, 410, no nonwhites; Lakewood School, 344, 0.3% and 0; Pattengill School, 389, 2.6% and 0.8%; Pittsfield School, 263, 0.8% and 0.8%.

different age levels, of interrelationships between the measures obtained. A similar procedure was adopted for the rating scales completed by teachers, so that each teacher rated all of his or her pupils on some, but not all, of the scales used. The actual division of test and rating scale "segments" among the six receiving schools is shown in Tables 3-1 and 3-2.

The need for posttransfer data to reflect the effects of regular contact between the transfer group and the receiving-school population dictated a logical and administratively uncomplicated choice for the follow-up sample: the receiving-school classmates of transfer pupils. Hence, full follow-up data were collected on all receiving-school classes with one or more transfer pupils enrolled. In Phase 2 (fall 1965), 1,258 receiving-school pupils in 67 classes participated in the study. Following Phase 2, two of these classes lost their transfer pupils and consequently did not participate in Phase 3 (spring 1966); another class which had no transfer pupils during Phase 2 acquired one subsequently, and was included in the study during Phase 3.

There is an obvious disadvantage in the combined sampling procedures used here. Separately, each should provide representative data about the population. The combination presents certain difficulties, however, for the assessment of change over time: change in a given characteristic can be measured only in pupils having both "pre" and "post" data for that characteristic. With the fractionation procedure employed in the collection of pretransfer data, only about a third of the pupils at a given grade level, on the average, contributed data on a given measure. And of those who did, some were not represented in subsequent phases of the study, either because they moved away or because they happened to be in classes enrolling no transfer pupils. The analysis of change, therefore, is based on a substantially smaller sample of receiving-school pupils than are the within-phase analyses.

3. Data Collected

Data were obtained from five sources: (1) special tests and inventories administered to pupils, including interview data collected by examiners; (2) rating scales completed by teachers; (3) school records, including the results of routine evaluative procedures; (4) a special questionnaire attached to the annual school census; and (5) in the case of the transfer group, individual parent interviews. All characteristics to be examined were assessed prior to the transfer (May-June 1965) and at the end of the first post-transfer year (May-June 1966). Some were also examined in the interim (October-November 1965) for evidence of early effects of the transfer; they are indicated by an asterisk (*) below.

Data from Special Pupil Tests and Inventories[1]

a. Scholastic achievement (reading)
b. Scholastic aptitude (IQ)
c. Achievement motivation
*d. Anxiety (general anxiety and school anxiety)
*e. Self-esteem
*f. Peer relationships (acceptance of, and by, classmates)
*g. Perceptions of, and reactions to, school experience (teacher helpfulness, classroom milieu, morale, own classroom behavior, etc., and, for transfer pupils, feelings about the transfer)

Data from Teachers' Ratings

*a. Behavior in school (adjustment, agressiveness, general appropriateness of school behavior, etc.)
*b. "Social stimulus" characteristics (cleanliness and grooming, attractiveness, etc., and, for Negro pupils, relative darkness or lightness of skin color)
*c. Adjustment to the transfer (transfer pupils only)

Data from School Records

a. School attendance
b. General physical characteristics (height, weight, general health)
c. Physical limitations (vision, hearing, speech, other handicaps)
d. Athletic skills (coordination, speed, strength, as assessed in annual physical education evaluations)

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[1] Special data collected on some of the younger pupils for a related study of language and speech characteristics are described in Appendix B.

Table 3-1. DIVISION OF PUPIL TESTS AMONG RECEIVING SCHOOLS
(Pretest, spring 1965)

Grade	A	B	C
K	Lorge-Thorndike Lee-Clark (Pattengill)	Lorge-Thorndike Achievemt motiv. (Lakewood)	Lee-Clark ITPA[a] (Allen)
1	Lorge-Thorndike Gates Reading (Dicken)	Bower S-E Achievemt motiv. (Pattengill)	Gates Reading Achievemt motiv. (Pittsfield)
2	Lorge-Thorndike Gates Reading School Attitudes (Bach)	Lorge-Thorndike Achievemt motiv. Sarason GASC (Allen)	Gates Reading Bower S-E Coopersmith S-E (Pattengill)
3	Lorge-Thorndike Classroom Ques. Coopersmith S-E (Allen)	School Attitudes Sarason GASC Lorge-Thorndike (Pittsfield)	Gates Reading Achievemt motiv. Lorge-Thorndike (Pattengill)
4	Lorge-Thorndike Gates Reading (Allen)	Lorge-Thorndike Achievemt motiv. School Attitudes (Bach)	Achievemt motiv. Coopersmith S-E Sarason GASC (Dicken)
5	Lorge-Thorndike Sarason GASC Coopersmith S-E (Lakewood)	Lorge-Thorndike Classroom Ques. (Dicken)	Gates Reading Achievemt motiv. Sarason GASC (Pattengill)

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[a] The Illinois Test of Psycholinguistic Abilities was included as part of a related study (Appendix B.)

Table 3-1 (continued)

Grade	D	E	F
K	Achievemt motiv. (Dicken)	Bower S-E ITPA (Pittsfield)	Bower S-E Lee-Clark (Bach)
1	Lorge-Thorndike Bower S-E (Allen)	Gates Reading ITPA (Lakewood)	Lorge-Thorndike ITPA (Bach)
2	Achievemt motiv. School Attitudes Classroom Ques. (Lakewood)	Sarason GASC Bower S-E Classroom Ques. (Pittsfield)	Classroom Ques. Sarason GASC Coopersmith S-E (Dicken)
3	Gates Reading Sarason GASC Classroom Ques. (Bach)	Achievemt motiv. Coopersmith S-E Classroom Ques. (Lakewood)	School Attitudes Coopersmith S-E Gates Reading (Dicken)
4	Classroom Ques. Gates Reading Coopersmith S-E (Lakewood)	Sarason GASC Classroom Ques. School Attitudes (Pattengill)	--[b]
5	Achievemt motiv. School Attitudes Classroom Ques. (Allen)	Gates Reading Coopersmith S-E School Attitudes (Bach)	--[b]

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[b] Tests for grades 4-5 comprised five segments, rather than six. Fourth- and fifth-grade pupils from one receiving school (Pittsfield) were temporarily housed at another (Pattengill) during the pretransfer year, while an addition to the school was under construction.

Table 3-2. DIVISION OF RATING SCALES AMONG RECEIVING SCHOOLS (Pretest, spring 1965)

Grades K-3:

A	B	C
Coopersmith McNeil	Coopersmith Quay	Coopersmith Social Stimulus
(Dicken, K-1; Pattengill, 2-3)	(Lakewood, K-1; Allen, 2-3)	(Bach, K-1; Pittsfield, 2-3)

D	E	F
McNeil Quay	McNeil Social Stimulus	Quay Social Stimulus
(Pattengill, K-1; Bach, 2-3)	(Pittsfield, K-1; Lakewood, 2-3)	(Allen, K-1; Dicken, 2-3)

Grades 4-5:[a]

A	B	C	D	E
Coopersmith McNeil Social Stimulus	Coopersmith Quay	Coopersmith Social Stimulus	McNeil Quay	McNeil Social Stimulus
(Bach)	(Dicken)	(Lakewood)	(Allen)	(Pattengill)

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[a] As with pupil tests, rating scales for grades 4-5 comprise five segments, rather than six (see footnote b, Table 3-1).

e. Family background (parent education, occupation, and birthplace; pupil's birthplace; number, age, and sex of siblings; years of residence in state, local community and at present address; family intactness, socioeconomic status, etc.)
f. Achievement test scores (reading and quantitative skills) from routinely administered standardized tests
g. Referrals for special help (psychological testing, speech, helping teacher, etc.)

Data from Census Attachment

a. Verification of family background data, sometimes not recorded or not current in school records.
b. Family residence (number of rooms in the home, number of people regularly residing there, etc.)

Data from Parent Interviews (transfer pupils only)

a. Child's home responsibilities
b. Child's participation in organized activities, in and outside of school in general
c. Child's preferences for leisure-time activity
d. Activities regularly shared by child and parents
e. Parent participation in school and community activities
f. Enrichment materials in the home (books, magazines, newspapers, television, etc.)
g. Parent attitudes toward the transfer, and toward school
h. Parent aspirations for the child

4. Instrumentation

Special Pupil Tests and Inventories

The selection of instruments and techniques was importantly influenced by the desire to assess the same characteristics over a considerable age range. Some of the instruments selected are applicable over the entire elementary grade range; nearly all can be used with at least the upper two thirds of that range.[1] The tests are primarily group tests, although at the lower grade levels (and in individual cases, as required), they were administered to small groups of pupils, or individually, to allow close supervision of performance. Questionnaire items were read aloud to all pupils, to rule out reading ability as a confounding factor in the responses.

All of the instruments are appropriate for administration by classroom teachers, but, in recognition of the burden this would impose on teachers, as well as the possibility that teacher influence might somehow be reflected in pupils' test results (Goodwin & Lambert, 1965), all testing was done by special examiners who were not regularly assigned school employees. Examiners were drawn primarily from the ranks of graduate students and substitute teachers with relevant experience; all participated in a special training workshop to develop comfortable command of the techniques.

The instruments and techniques employed are described below.

a. Scholastic aptitude and achievement

The Lorge-Thorndike Intelligence Tests (1957 edition) were administered to pupils in all grades.

Gates Reading Tests (1958 edition) provided vocabulary, comprehension, and average reading scores for pupils in grades 1-5. Pupils who began the study as kindergarteners were administered the Lee-Clark Reading Readiness Test (1962 edition) prior to the transfer, and the Gates reading tests the following year. Both pre- and posttests on the last two instruments were administered within one-week periods (the last week in May) for maximum comparability of reading scores across the populations involved.

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[1] Grade levels at which the various instruments were used are indicated in the test descriptions. Unless otherwise noted, pupils were tested with the same instruments both before and after the transfer. Thus, an instrument administered in grades 2-5 during the pretransfer year was given in grades 3-6 the following year.

School records provided the following additional data: scores from the California Achievement Tests (1957 edition, 1963 norms), administered annually at midyear to all elementary pupils in grade 2 and above (reading) and grade 3 and above (arithmetic). Only in the case of arithmetic scores were these routine test results relied upon for evaluating change following the transfer. Mid-year reading scores were considered unsatisfactory for pretransfer baseline measures because of the intensive remedial help provided to many of the transfer pupils during the year preceding the transfer.

b. Achievement motivation

Two techniques were employed to assess achievement motivation under the direction of Professor Joseph Veroff, of the University of Michigan Institute for Social Research. These two techniques have been experimentally validated by Veroff (1965) and others (Callard, 1964; DePree, 1962). Both are assumed to reflect the joint action of a positive need for achievement and an avoidant fear of failure; they are based on Atkinson's formulation (1958a) of achievement risk behavior as an indicator of high achievement motivation. Both measures are individually administered and were obtained for pupils at all grade levels.

One of these measures taps the child's risk-taking preferences within his own capacities for performance. This measure has been validated in experimental arousal studies, is a predictor of over- and underachievement in second-grade pupils, is related to test anxiety under certain conditions and to maternal attitudes toward achievement and independence. The procedure involves a series of graded tasks which are presented in steps of increasing difficulty until two in a row are failed. The child is then asked to do one more, of his own choosing: (1) the first (easiest one) (2) the last one he was able to do correctly, (3) the first one failed, or (4) the last one failed (the most difficult). The choice of (2) or (3) is assumed to be a choice of challenge, since they represent tasks the child has just managed to succeed at, or just missed. Four series of tasks are used; the number of "middle" choices over the four series is taken as the measure of achievement motivation. The tasks are:

Simple recall	Naming from memory objects pictured on sheets of paper
Memory for form	Reproducing bead string patterns from memory
Drawing	Copying designs which vary in complexity
Motor skill	Throwing a ball into a basket from various distances

The second measure of achievement motivation reflects an interest in competition with others. It, too, is subject to experimental arousal, and is related to persistence in the face of difficulty. Here the child is asked which of three undefined tasks he would choose to do: (1) a task which is easy for children his age, (2) a task that very few children his age can do, or (3) a task that some children his age can do and some cannot do. The hypothetical task is not described to the child; his choice, therefore, is not influenced by expectations based on specific previous performance, and depends, instead, on his preception of himself as a generally good or poor performer.

c. Anxiety

Measures of anxiety were obtained with the assistance of Professor Edgar Epps, formerly of the University of Michigan Institute for Social Research and now at Tuskegee Institute. Both general anxiety and anxiety specific to school situations were assessed, the latter having important implications for the interpretation of academic test results (Sarason, 1957; Sarason, 1963).

General anxiety was assessed in a special study by Epps, using the General Anxiety Scale for Children (Sarason et al., 1960). Measures of school anxiety were provided by two instruments included in the battery for other purposes as well -- School Attitudes Card Sort and Classroom Questionnaire. These multidimensional instruments reflect various elements of school experience as perceived by the child, and are described in that context below (pp. 36-37).

As with other emotional and attitudinal characteristics which do not lend themselves to wide-scale assessment except through the use of self-report instruments, the measurement of anxiety was limited here to pupils mature enough to comprehend the self-report technique. The instruments yielding anxiety scores were administered to classroom groups in grades 2-5 during the pretransfer year, and were administered the following year in grades 3-6.

d. Self-esteem

A measure of self-esteem for lower-grade pupils was sought in A Picture Game (Lambert & Bower, 1961). This instrument, developed as a screening device for emotional disorders in young school children, consists of a series of picture cards showing children engaged in various activities at school, at home, etc. The child is required to judge whether the situations depicted are happy or unhappy ones, and to sort the cards into two piles accordingly. The first ten cards present "obvious" discriminations and furnish a check on the child's comprehension of the task. The remaining cards are ambiguous with respect to the affective tone of the situations presented. The extent to which the child ascribes positive affect to these situations (and to those depicted in the first 10 cards) is taken as a reflection of his general self-esteem. Although designed for classroom use, this instrument was administered to groups of 4-5 children at most, to permit close supervision of the sorting. It was used with pupils who began the study in grades K-2[1] and was given in grades 1-2 the following year.

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[1] Those in grades 2 during the pretransfer year were included only to allow a determination of the comparability of the Lambert-Bower measure and the Coopersmith measure obtained in grade 2 and up.

Older pupils (grades 2-5 during the pretransfer year) were given the Coopersmith Self-Esteem Inventory (Coopersmith, 1959).[1] This instrument presents brief statements to be checked by the child as "like me" or "unlike me." It yields a total self-esteem score and subscores for personal, social, and school-related components. It is administered to classroom groups.

e. Peer relationships

Peer relationships were studied by means of a saturation sociogram, in which the child is given a list of all the pupils in his class and indicates his liking for each one by checking the appropriate box: "a lot," "some," "a little," or "very little." When he comes to his own name, he marks the box corresponding to the way he thinks his classmates feel about him. The Social Distance Scale, as the instrument is referred to here, was scored for both acceptance received and acceptance given. Weighted scores (4 = like a lot, 1 = like very little) were expressed as percentages of the maximum possible score, which varies with class size. The Social Distance Scale was administered individually to pupils in grades K-1, to small groups of pupils in grade 2, and to classroom groups in grades 3 and up.

f. Perceptions of, and reactions to, school experience

Two self-report instruments provided data relating to the nature of the school experience as perceived by pupils. Both instruments yield measures of school anxiety and several other factorial dimensions, some relating to characteristics whose primary assessment was sought in other techniques (e.g., motivation, peer relationships).

One of these self-report instruments, the School

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[1] This instrument, and those which follow, have been subjected to extensive study by University of Michigan researchers associated with the Michigan Regional Center for Pupil Personnel Services. Factorial validity has been demonstrated, and norms compiled, for many of the characteristics measured, in conjunction with the University School Research Project (Ketcham and Morse, 1965).

Attitudes Card Sort, is a procedural variant of the questionnaire technique. It consists of a number of statements relating to school experience (e.g., "I like school") which are printed individually on cards and presented, one at a time, to the child. The child sorts the cards into envelopes labeled "most of the time," "sometimes," "hardly ever," and "never" corresponding to his feeling about the statement. Scores on five factorial dimensions are obtained; they are labeled school anxiety, academic success and morale, self-perceived troublemaker, peer relationships, and general negative interpersonal relationships. The card sort was administered individually to pupils in grades 2 and up. Those who began the study as first-graders were not pretested with this instrument but were included in both fall and spring assessments the next year, contributing to the data on changes occurring during that school year.

The Classroom Questionnaire consists of several questionnaire scales dealing with various aspects of classroom experience. Some of these scales lack relevance to questions asked in the present study and were not administered. The scales used yield scores on four factorial dimensions, labeled motivation, perception of teacher as learning facilitator, school anxiety-inadequacy, and supportive classroom milieu. These scales were administered to classroom groups in grades 2-5 during the pretransfer year, and grades 3-6 the following year.

g. Pupil interviews

The involvement of all pupils in at least one individual testing session presented a natural opportunity for informal interview. This opportunity was used to explore the feelings of transfer pupils about the transfer, and to obtain from all pupils current perceptions of their aspirations for adulthood.

Occupational aspirations expressed by elementary pupils may well be too transitory, and too dependent on immediate situational factors, to reflect any meaningful change (e.g., in motivation) over time. Deutsch (1960), however, has reported interesting differences in the aspirations of segregated Negro and white boys of this age (indicating, among other things, no support for the popular idea that Negro boys commonly aspire to sports careers). Since it was possible to pursue the question of occupational aspiration without extra involvement on the part of pupils or personnel, it was explored. Pupils in grades K-1 were interviewed following administration of the Social Distance Scale. All other pupils were interviewed after completing the School Attitudes Card Sort. The examiner served as interviewer.

Teacher Rating Scales

Although there are inherent difficulties in the interpretation of ratings as reflective of actual behavior, there is presently no way to assess a child's typical behavior in the classroom except to rely on the report of an observer, and one having extended contact with the child in the classroom. Perhaps it should be pointed out that a teacher's perception of a child is likely to be a critical factor in her treatment of him, and that, in turn, can be expected to influence his response to school. In this sense, teachers' judgments of pupil behavior may be more relevant to the issue at hand than would some hypothetical objective measure.

The rating of all pupils in a class on several rating scales is a considerable task. In the interest of securing the cooperation necessary to thoughtful appraisals, each teacher was provided with a day of released time for this task. The scales used are described below.

a. Ratings of pupil behavior

Three instruments provided ratings of pupil behavior; all were obtained from the Michigan Regional Center for Pupil Personnel services (see footnote, p. 36).

The Coopersmith Behavior Rating Scale covers a variety of characteristic school behaviors and yields an index of "appropriateness" of typical classroom behavior.

The McNeil Teacher's Rating Scale deals with aggressive behavior in response to various kinds of school situations; it yields an index of characteristic aggressiveness in the school setting. A final item reflects degree of self-satisfaction as observed by the teacher.

The *Quay Symptomatic Behavior Rating Sheet* is a behavior checklist yielding scores on eight factorial dimensions; labeled as follows: deceit, organic-psychotic manifestations, neurotic behavior, immaturity, distractibility, aggression, passivity, and values.

b. Ratings of social stimulus characteristics

The *Social Stimulus Rating Scale* is a brief and frankly exploratory instrument, devised for the present study in an effort to get at a child's impact, as a human being, on others. The following attributes are covered, as potentially important dimensions of "impact" in the context of the present study: cleanliness and grooming, physical attractiveness, general likeability (the personality counterpart of attractiveness), influence (leadership "potency," whether positive or negative), and, for Negro pupils, relative darkness or lightness of skin color. The last is reported to be a contributing factor in response to Negro pupils by both Negro and white peers (Koch, 1946; Landreth & Johnson, 1953).

c. Ratings of adjustment to the transfer

Also incorporated in the *Social Stimulus Rating Scale* (though not technically a part of it) was an item to be rated for transfer pupils only, which solicited teacher appraisal of pupil adjustment to the transfer.

Parent interviews

Parents of all transfer pupils were interviewed in their homes by trained social workers affiliated with the public schools. Pretransfer interviews were conducted during the summer of 1965; follow-up interviews were conducted the next summer. Interviews were semistructured, allowing the interviewer considerable freedom in his approach, so as to establish the best possible relationship with the family.

5. Data Analysis

Collection of data for the present study was guided by this primary question: what is the measurable impact of one year of desegregated schooling on a variety of behavioral characteristics of pupils transferred from a de facto segregated school -- on their achievement, their attitudes toward school, their peer relationships, their motivation, their self-esteem, and so on. This question has several dimensions, each calling for somewhat different yardsticks.

First, assessment of impact requires knowledge of starting points and of change in these various behavioral characteristics, for the transfer group and for other pupil populations with whom comparisons are to be made. Fundamental to the interpretation of these data is information about background factors -- such things as socioeconomic status, family stability, school attendance, problem behavior, and the like -- which, if different among the populations studied, might account for initial differences and/or differential change in behavioral characteristics. Still another dimension of the question, given added impetus recently by the seemingly conflicting early results of desegregation programs elsewhere (see Chap. 2), is the identification of concomitants of change, where change does occur.

The analyses undertaken to provide these several yardsticks are described in the first three sections of this chapter, while the fourth section deals with the analysis of interview data gathered from transfer pupils and their parents.

It is perhaps well to point out here that the need to interpret findings meaningfully to school staff and to the local community was a prime consideration in choosing methods for analysis. Complex statistical techniques were rejected in favor of simpler ones, whose rationale and product could be more readily understood by persons not trained in research. Even so, it is not an easy task to come to grips with such a vast quantity of data, and there are several considerations the reader will find it helpful to keep in mind as he peruses the remainder of the report. These are described in the concluding section of this chapter.

Background Factors

Demographic characteristics of pupils and their families, along with a number of school history factors, were analyzed for the transfer, nontransfer, and receiving-school pupils. The method of choice here was simple analysis of variance to test the significance of differences among the three groups. Where analysis of variance could not be applied -- i.e., with categorical variables -- the data were analyzed in terms of frequencies and percentages only. The significance of differences on these variables was not tested; as will be apparent subsequently, expected frequencies in some cells were consistently too small to warrant application of the appropriate statistic for this purpose. Analyses of background factors are described in Chapters 4 and 5.

Effects of the Transfer

Effects of the transfer were assessed in two ways. First, comparisons were made among transfer, nontransfer, and receiving-school pupils, on both pre- and posttransfer data, to determine the nature of initial differences and the extent to which any such differences were altered following the transfer. Simple analysis of variance was employed for these comparisons.

Secondly, changes occurring over the three assessment periods (the spring before transfer, and the subsequent fall and spring) were analyzed for those pupils who were participants during all three periods. Change scores, representing the differences between means for the first and second, second and third, and first and third assessment periods, were analyzed separately for transfer, nontransfer, and receiving-school pupils. A *t* test for related measures was employed to test the significance of differences (i.e., changes) occurring over each of these three time intervals. It should be noted that *n*'s for these between-phase analyses are necessarily smaller -- and in the case of receiving-school samples, greatly so -- than *n*'s for the within-phase analyses described above. The former serve primarily to amplify the latter, in showing patterns of change within the three populations.

Analyses relating to the effects of the transfer are reported topically in Chapters 6-10.

Concomitants of Change

A number of technical difficulties delaying the timetable for this report also ruled out inclusion of the kind of extensive analysis for concomitants of change envisioned at the outset. Pursuit of the factors contributing to favorable and unfavorable responses to the transfer is dependent on the occurence of differential changes of some magnitude withing the transfer group. Hence, analyses directed to this question necessarily follow, and are guided by, the demonstration of such changes. With this fundamental information coming too late to pursue the question as planned, it became necessary to adopt alternative procedures which could be followed concomitantly with the analysis of change.

As a first step, transfer pupils were grouped according to achievement gains, and data on other variables were examined for any concomitants that might be apparent on inspection. Subsequently, correlations were calculated between change scores for transfer pupils and (1) selected background factors, and (2) initial and final scores on selected behavioral variables. Recognizing the unreliability of change scores, this analysis nonetheless promised some preliminary leads in a relatively untouched area of inquiry.

By the time the latter analysis was undertaken, there was enough evidence of important Negro-white differences in the data to suggest that correlations based on the racially mixed transfer group, as such, might not lend themselves to meaningful interpretation. The number of white transfer pupils having the requisite change scores was too small to warrant the calculation of separate correlations for that group. Thus, only Negro transfer pupils are represented in this analysis.

Analyses relating to the concomitants of change are reported in Chapter 11.

Interview Data

Data gathered in interviews with transfer pupils and their parents deal primarily with expressed attitudes toward the transfer and related events, with parent-school interaction, and with parents' aspirations for their children. For the most part these data are categorical and, as with other categorical measures, were analyzed in terms of frequencies and percentages. In a few instances, where the data lend themselves to such treatment, means were calculated and reported as the "typical" response for the group.

Analyses of interview data on the transfer population are reported in Chapter 12.

Further Considerations in Data Analysis

As the data are examined throughout this report, there are several points to be kept in mind. First, it will be noted, in the data tables presented throughout the text, that the data for transfer, nontransfer, and receiving-school pupils are in most instances broken down by grade, race, and sex. The reasons for these breakdowns will be self-evident to some, but they warrant brief comment here, as do their consequences for interpretation of the data.

Several of the measures are clearly age-linked. Achievement test scores, reported here as age-equivalent scores, are an obvious example. Measures of personal traits, attitudes and the like may well reflect developmental patterns which relate to age. Thus, a conglomerate statistic lumping together children from a six-grade span will obviously be meaningless in some instances, may be meaningless in others, and will in any case obscure age-related patterns which may be important to understand. Here, those variables which are known to be age-linked are examined within the relatively narrow band of a single grade level; achievement test data, for example, are presented separately for each grade represented in the study. This treatment, of course, limits the number of cases in each grade "cell," with consequent problems of interpretation (see p. 44). It is used, therefore, only where age or grade clearly has implications for the values obtained. For other variables, scores are examined within the broader band of two grades: K and 1 are combined as one group, 2 and 3 as another, 4 and 5 as a third group.[1]

The data are further broken down by sex and by race, because sex and/or race differences are widely reported for some of the measures used here, and may well exist for others which have not been so examined. It can be assumed that the three populations are roughly equivalent with respect to the ratio of boys to girls, but this does not necessarily hold true at every grade level. And of course the populations do differ greatly with respect to the Negro-white ratio. Hence, data for the three populations will be differentially influenced by such differences as do exist between white and Negro children, and perhaps to some extent by differences between boys and girls. A more meaningful picture thus emerges from examining separately the findings for Negro boys, white boys, Negro girls, and white girls.

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[1] To avoid confusion in the identification of grade groups, grade levels for the pretransfer year are used throughout this report. Hence, K-1 always refers to those pupils who were in kindergarten and first grade during the year preceding the transfer.

An important consequence of dividing the populations by grade, sex, and race is the substantial shrinkage of cases within cells. Consider a hypothetical population of 100 pupils containing 50 boys, of whom six are Negro but only one or two are Negro second- or third-graders. Data for the cell "Negro boys in grades 2-3" cannot, in this instance, be considered as representative of Negro boys in grades 2-3; the number of cases is too small to warrant such generalization. Thus, where populations are relatively small to begin with, the necessary fractionation by grade, sex, and race may well result in numbers too small to permit meaningful interpretation. It will be seen in the data tables that even for combined-grade analyses, the number of white male or white female transfer pupils appearing in a given cell rarely exceeds five, and is often less than five.[1] While descriptive statistics -- means, percentages, etc. -- are shown for these few children, relative to their counterparts in the non-transfer and receiving-school populations, the statistics must be considered cautiously. The numbers are simply not large enough to be considered representative of white children from a ghetto area. The same caution is necessary with respect to Negro boys and girls in the receiving-school population, although except where change scores are involved, the numbers here are generally at least twice as large as those for white boys and girls in the transfer group.

These limitations are unfortunate, from the standpoint of broad scientific inquiry. They are less critical, however, to the major concerns of the present study. Local

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[1] The number of cases (n) varies from table to table as a result of missing data. Where a child missed a particular test, or where it could not be determined, for example, how long the family had resided in the city, or what the father did for a living, that child is necessarily not represented in the data tables for those variables.

community interest has focused primarily on the Negro transfer pupils; it was concern for those children which set in motion the series of events which led to the closing of the _de facto_ segregated school. Data for other groups of pupils will be of interest locally, in their own right, but their value to this research lies essentially in the reference points they provide for the transfer population, and especially for the Negro segment of that population. Of these reference points, the most important are the Negro students from other schools (since it has been contended by many that _de facto_ segregated schools do not afford Negro students an equal educational opportunity) and, inevitably, the receiving-school whites, representing in this largely white community a desirable "standard."

Another important point to be noted is that statistical comparisons presented in this report were guided by a single consideration: the answering of a set of questions about the behavioral consequences of compulsory pupil transfer. Our interest, thus, centers on the transfer population and its relationship to the nontransfer and receiving-school populations; and it is among these three populations (or subgroups thereof) that apparent differences have been examined for statistical significance. Those interested in comparing whites with Negroes, or girls with boys, or younger and older children will find the relevant data here. However, such differences as may be observed between these groups have not been tested for significance, and are not dealt with at length in the text.

Finally, no attempt is made here to describe interrelationships between all variables. Correlations have been computed, however, for the combined populations (transfer, nontransfer, and receiving schools), and selected coefficients are reported in the text where they are germane to the discussion.

Chapter 4

DEMOGRAPHIC CHARACTERISTICS

Demographic data were gathered during the final phase of data collection (spring 1966) and are available, consequently, only for pupils enrolled during that phase. For the nontransfer and receiving-school populations, these include a number of "move-ins" -- 37 and 326 pupils, respectively -- who were not a part of these populations during the initial phase of the study (spring 1965). This is not true for the transfer population, however. Pupils moving into the transfer area after its neighborhood school was closed could not legitimately be counted as desegregated pupils, since they had not attended the _de facto_ segregated school. Such children were not, therefore, included in the study.

Demographic data describing the three populations are presented in some detail, so as to highlight important similarities and differences in these groups, and so others wishing to relate our findings to theirs can readily determine the comparability of their samples to those studied here. As is true for other variables, the demographic data have been examined by sex, race, and grade. The existence of racial differences in demographic characteristics is predictable, and findings for Negroes and whites are separately reported in all data tables. There is little reason, on the other hand, to expect systematic sex- or age-related differences in demographic characteristics within the six-grade span represented here. Nonetheless, sex and grade splits have been preserved in the tables for most variables, so that subsequently presented findings for particular subgroups can be examined in relation to demographic characteristics of those subgroups. Exceptions are discussed in the text.

1. Family Background

Several family background characteristics were examined to provide a cultural context in which to view the three populations studied. Included are pupil and parent birthplace, parent citizenship, language spoken in the home, and country or state of previous residence.

Pupil Birthplace

Eighty-three percent of the pupils participating in the study were born in the Midwest.[1] Corresponding percentages for the transfer (T), nontransfer (NT), and receiving-school (R) populations are 88, 83, and 82, respectively.

The geographic distribution of birthplaces for pupils not born in the Midwest is shown in Table 4-1. Except where otherwise noted, table entries are simple frequencies; percentages tend to be misleading when the number of cases per cell is as small as many are here.

It can be seen from the table that distributions for the three populations are essentially similar. Only the Northeast and South are represented by appreciable numbers of pupils; so few were born in other regions of the United States and in English-speaking foreign countries that these have been combined in a single table category. Finally, a uniformly small fraction (2-3%) of each population comes from foreign countries where English is not the native language.

Slight differences in percentages of northeastern-born and southern-born children are worthy of note, perhaps, in view of the data for parent birthplace presented in the next section. Pupils born in the South account for 9 percent of the transfer group, 7 percent of the nontransfer group, and 4 percent of the receiving-school group; corresponding percentages for the Northeast are 0, 4, and 6, respectively. Inspection of the last row of the table, which shows percentages for the combined grades (K-5), suggests that these differences reflect the differing racial compositions of the three populations. Not one Negro child in the study was born in the Northeast, whereas 15 percent of the Negro boys and 16 percent of the Negro girls were born in the South.

Parent Birthplace

As might be expected, parent birthplaces are somewhat more dispersed than those of pupils, with 63 percent of the total parent group claiming midwest origins. Here, however,

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[1] Midwest here includes Michigan, Ohio, Indiana, Illinois, Missouri, Wisconsin, Minnesota, Iowa, Kansas, Nebraska, North Dakota, and South Dakota.

Table 4-1. GEOGRAPHIC DISTRIBUTION OF PUPILS BORN OUTSIDE THE MIDWEST[a]

Group	White boys				Negro boys				White girls				Negro girls				% of Total[b,c]				
	N	S	O	F	N	S	O	F	N	S	O	F	N	S	O	F	N	S	O	F	Mw
K-1: T	0	0	0	0	0	1	1	0	0	0	0	0	0	1	1	0	0	5	5	0	90
NT	3	1	1	0	0	1	0	0	1	0	1	2	0	3	0	0	4	4	2	2	89
R	15	8	17	3	0	2	0	0	22	8	16	5	0	3	0	0	7	4	6	1	82
2-3: T	0	0	0	0	0	3	0	0	0	0	0	1	0	1	0	0	0	10	0	2	88
NT	3	0	3	3	0	3	0	0	3	2	0	0	0	3	0	0	5	7	3	3	82
R	13	9	12	4	0	1	0	0	18	10	14	8	0	3	0	0	6	4	5	2	83
4-5: T	0	0	0	1	0	1	0	0	0	0	0	0	0	3	0	0	0	12	0	3	85
NT	1	0	1	3	0	5	0	1	1	1	6	1	0	5	0	0	2	10	6	5	78
R	15	6	15	4	0	3	0	0	14	5	7	8	0	3	0	0	7	4	5	3	82
% all grades:	6	3	6	2	0	15	1	1	7	3	5	3	0	16	1	0	5	5	5	2	83

Note.--Table entries are frequencies except where otherwise indicated.

[a] Categorized as follows: N, Northeast; S, South; O, other U.S. regions plus English-speaking foreign countries; F, nonEnglish-speaking foreign countries. Comparative percentages for Midwest (Mw) are tabled in the far right column. The three populations are designated T (transfer), NT (nontransfer), and R (receiving schools).

[b] Overall percent by population: transfer (n = 112), 0% N, 9% S, 2% O, 2% F, 88% Mw; nontransfer (n = 338), 4% N, 7% S, 3% O, 3% F, 83% Mw; receiving schools (n = 1549), 6% N, 4% S, 5% O, 2% F, 82% Mw.

[c] Here and in subsequent tables reporting percentages, component percentages may not add up to 100 as a result of rounding the obtained values to whole numbers.

striking differences occur between the three populations.

Table 4-2 summarizes the distribution of parent birthplaces for the transfer, nontransfer, and receiving-school populations, as well as for Negroes and whites. Within these major groupings, distributions for parents of boys and girls, and of pupils at various grade levels, were essentially identical. Sex and grade splits are not, therefore, shown in the table.

As the table shows, about two thirds of the receiving-school parents were born in the Midwest, compared with about half of the nontransfer parents and a third or less of the transfer parent group. The transfer group is seen to include a substantially greater proportion of southern-born parents -- nearly two thirds, compared with a third of the nontransfer parents and about a tenth of the receiving-school parents. And, as was also true for pupils, no transfer parent was born in the Northeast, which does have appreciable representation (about 10%) in the other two populations. Again, these differences appear to be associated with the racial composition of the three populations. The greatest differences are those occurring between Negro and white parents, the former coming in substantial numbers from the South, the latter from the Midwest and Northeast.

Parent Citizenship

It will be evident from the foregoing data on parent birthplace that the vast majority of parents are American citizens. Percentages range between 97 and 98 for mothers and for fathers in each of the three populations. In the transfer group, those claiming American citizenship are all native-born Americans; a small fraction (2-4%) of the nontransfer and receiving-school parents are naturalized citizens. This pattern is uniformly consistent across sex, race, and grade groupings; hence, the actual distributions are not presented here.

Language Spoken in the Home

The picture here is comparable to that for parent citizenship. In each of the three populations, 1-2 percent of the mothers and fathers do not speak English. An additional 1-2 percent of the nontransfer and receiving-school parents are bilingual. The remainder (96-99 percent in the three populations) speak only English in the home. Again, as with

Table 4-2. GEOGRAPHIC DISTRIBUTION OF PARENTS' BIRTHPLACES[a]

Group[b]	N		S		O		F		Mw	
	n	%	n	%	n	%	n	%	n	%
T: Mothers	0	0	70	62	0	0	2	2	41	36
Fathers	0	0	69	68	4	4	2	2	27	26
NT: Mothers	24	7	100	30	21	6	14	4	172	52
Fathers	31	10	101	32	21	6	20	6	146	46
R: Mothers	172	11	154	10	125	8	52	3	1081	68
Fathers	152	10	122	8	155	10	58	4	1072	69
White: Mothers	194	11	141	8	135	8	67	4	1212	69
Fathers	180	10	104	6	171	10	77	4	1193	69
Negro: Mothers	2	1	183	66	11	4	1	0	82	29
Fathers	3	1	188	74	9	4	3	1	52	20

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[a] Categorized as follows: N, northeast U.S.; S, southern U.S.; O, other U.S. regions plus English-speaking foreign countries; F, nonEnglish-speaking foreign countries; Mw, midwest U.S.

[b] Combined grades (K-5) for each category.

parent citizenship, there are no noteworthy departures from this pattern when the data are examined by sex, race, and grade.

Country or State of Previous Residence

The last family background characteristic to be looked at is prior residence. Here differences are found among the three populations, and between Negroes and whites (Table 4-3). Within those groups, however, the pattern is consistent for boys and girls, and across grades; the data are not separately presented, therefore, for sex and grade groups.

As Table 4-3 shows, nearly 90 percent of the nontransfer and receiving-school families, and of white families generally, report the Midwest as the region of prior residence;[1] the rest are distributed pretty evenly across the remaining geographic categories. In the transfer group, slightly less than half the families report prior residence in the Midwest, while nearly as many (42%) resided previously in the South. Relating the latter figure to the data for pupil birthplace, an interesting phenomenon is observed. Given the substantial high percentage of transfer families who came to Ann Arbor directly from the South, and the fact that only 9 percent of the transfer pupils are southern-born, it would appear that many southern families in the transfer population established residence in Ann Arbor before the birth of the child involved in the present study, and represent, therefore, a reasonably stable element in the community.[2] This pattern does not hold for the nontransfer population, where 7 percent of the children are southern-born but only 3 percent of the families moved here directly from the South.

Negro-white differences in prior residence are similar to those occurring for parent birthplace, but of smaller magnitude; relatively fewer Negro families claim prior midwest residence (72%, as compared to 88% of the whites), while a much higher percentage of Negro families resided previously in the South (24%, as compared to 2% of the whites).

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[1] Includes lifelong residents.

[2] The question of residential stability is treated in the following section.

Table 4-3. STATE OR COUNTRY OF PREVIOUS FAMILY RESIDENCE[a]

Group[b]	N		S		O		F		Mw	
	n	%	n	%	n	%	n	%	n	%
Transfer	5	4	47	42	5	4	2	2	54	48
Nontransfer	10	3	10	3	4	1	11	4	276	89
Receiving	49	4	37	3	43	3	23	2	1174	88
White	58	4	33	2	48	3	36	2	1319	88
Negro	6	2	61	24	4	2	0	0	185	72

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[a] Categorized as follows: *N*, northeast U.S.; *S*, southern U.S.; *O*, other U.S. regions plus English-speaking foreign countries; *F*, nonEnglish-speaking foreign countries; *Mw*, midwest U.S.

[b] Combined grades (K-5) for each category.

2. Residential Stability

Data relating to residential patterns of transfer, nontransfer, and receiving-school families are presented in several tables. The reader is reminded that these data relate only to families who were in the sample during the final phase of data collection. Thus, one important aspect of residential stability is not reflected in the tables -- namely, the number of pupils who moved away over the course of the one-year study. "Move-outs" are discussed below; subsequent sections deal with years residence in Michigan, in Ann Arbor, and at present address, and finally with frequency of school changes for pupils.

Move-outs

Of the 165 pupils comprising the original group to be transferred, 131 remained as transfer pupils at the conclusion of the study. Losses were distributed as follows: three pupils shifted to parochial schools after the kindergarten year; 12 moved locally to contiguous attendance areas (nine to the nontransfer school, three to one of the receiving-school districts); and 19 moved out of the city or to local schools not involved in the study. Hence, nearly 19 percent of the transfer population changed residence during the one-year period of the study. A majority of the moves (25, or 81%) occurred over the summer, prior to implementation of the transfer, leading some in the community to speculate that families were moving so as to escape the transfer and the attendant busing of pupils from the neighborhood.

Comparative statistics were not available as to the mobility of this population in prior years; neither was there reported a general pupil turnover figure for the school system as a whole. However, data for the nontransfer population lend little support to the above explanation for mobility in the transfer population. Of the original nontransfer group, numbering 409, 319 pupils remained at the conclusion of the study. Losses here included 35 pupils who were shifted to a nearby school as the result of a boundary change; the remaining 55, or a little more than 13 percent of the original population, moved from the original attendance area. Moreover, 46 of those moves (84%) occurred over the summer. Thus, mobility during the period of the study was only slightly greater for the transfer population, and the high proportion of pretransfer moves was common to both groups.[1]

Michigan Residence

Turning now to the residential data for the residual populations, it can be seen that there is no consistent pattern of differences in Michigan residence (Table 4-4) for the transfer, nontransfer, and receiving-school groups. A tendency is apparent for families of Negro transfer pupils to have resided in the state longer than Negro families in the other two groups, and especially the receiving-school families (though n's there are small). Group means indicate an extended period of continuous midwest residence (15 years or more) to be characteristic of all three populations.

Ann Arbor Residence

A general pattern for continuous Ann Arbor residence (Table 4-5) shows the transfer group to have the greatest longevity, the receiving-school group the least, and the nontransfer group to fall somewhere between. This pattern is present for totals at all grade levels and is significant for the two younger groups (K-1, 2-3). As was true for Michigan residence, differences between transfer and receiving-school families are most evident among Negroes, although the differences reach statistical significance only for families of Negro girls in grades K-1 and 2-3. Not unexpectedly, Michigan and Ann Arbor residence are substantially correlated in the combined populations (r = .64).

Years at Present Address

Years residence at present address (Table 4-6) shows the transfer population as a whole to be clearly and significantly different from the nontransfer and receiving-school populations. Families of transfer pupils have resided at the same address for 6-7 years, on the average, compared to 2-4 years for the other two groups. When the populations are split by sex and race, the same trend is apparent for

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[1] Comparable data are not available for the receiving-school population. Given the criterion for inclusion of a receiving-school pupil in Phases 2 and 3 of the study (i.e., placement in a class enrolling one or more transfer pupils), there are necessarily large discrepancies between the number of such pupils participating in Phase 1, when all receiving-school pupils took part, and the number participating in subsequent phases.

Table 4-4. YEARS OF MICHIGAN RESIDENCE

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	15.0	13.3	4	20.3	10.6	14	12.0	5.7	2	19.1	11.0	19	18.7	10.7	39
NT	15.9	12.9	33	14.7	10.2	19	18.1	11.9	34	12.1	8.5	24	15.6	11.3	110
R	15.5	12.4	249	11.2	10.8	9	15.4	12.1	243	9.6	13.9	5	15.3	12.3	506
	F= 0.021			F= 2.238			F= 0.854			F= 3.253*			F= 1.467		
2-3: T	14.3	8.4	3	15.7	9.1	14	13.5	3.5	2	17.3	9.4	21	16.3	8.8	40
NT	19.1	13.1	28	12.2	6.7	20	20.4	12.9	35	11.7	7.1	30	16.4	11.3	113
R	15.9	11.9	255	18.0	12.0	5	15.6	11.9	237	7.0	4.4	6	15.7	11.9	503
	F= 0.948			F= 1.296			F= 2.560			F= 5.223**			F= 0.206		
4-5: T	21.8	11.6	5	17.2	9.0	16	16.7	1.2	3	12.4	9.4	10	16.4	9.3	34
NT	21.4	12.2	34	14.0	9.6	22	17.8	11.1	30	12.9	6.2	21	17.2	10.8	107
R	16.4	11.2	203	9.6	8.2	5	16.6	11.8	226	7.5	5.5	6	16.3	11.5	440
	F= 3.218*			F= 1.404			F= 0.157			F= 1.365			F= 0.273		

Note.--Significance levels are indicated as follows throughout this report: *$p \leq .05$, **$p \leq .01$.

Table 4-5. YEARS OF ANN ARBOR RESIDENCE

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	11.5	15.8	4	13.9	10.1	15	12.0	5.7	2	17.8	10.5	19	15.4	10.6	40
NT	9.6	10.3	33	15.1	10.3	18	11.5	8.1	34	9.2	6.8	24	11.0	9.1	109
R	10.0	9.8	248	7.0	5.6	9	10.0	9.5	241	3.2	3.0	5	9.9	9.5	503
		F= 0.076			F= 2.314			F= 0.437			F= 8.921**			F= 6.593**	
2-3: T	12.3	10.1	3	15.4	9.2	14	13.5	3.5	2	15.5	8.8	22	15.1	8.6	41
NT	11.7	9.3	28	10.8	7.0	20	12.5	11.0	35	9.6	6.3	31	11.2	8.8	114
R	10.6	9.6	262	11.6	9.7	5	10.5	9.9	241	6.6	4.8	5	10.5	9.7	513
		F= 0.219			F= 1.287			F= 0.656			F= 5.545**			F= 4.551*	
4-5: T	18.4	8.9	5	15.9	10.8	15	16.7	1.2	3	7.7	4.5	10	13.9	9.2	33
NT	14.7	11.1	34	11.7	9.0	22	12.3	9.7	29	11.1	7.3	21	12.7	9.6	106
R	11.8	9.4	204	7.2	6.4	6	11.2	9.3	221	5.8	5.4	6	11.3	9.3	437
		F= 2.354			F= 2.049			F= 0.700			F= 2.007			F= 1.875	

Table 4-6. YEARS AT PRESENT ADDRESS

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	6.0	6.9	3	5.6	6.5	15	1.5	2.1	2	7.0	8.1	18	6.1	7.1	38
NT	2.5	1.9	18	3.0	1.4	2	2.4	1.5	9	2.6	1.3	7	2.5	1.6	36
R	2.4	2.1	103	1.2	0.8	6	2.5	2.1	85	1.0	0.0	3	2.4	2.1	197
	F= 3.654*			F= 1.452			F= 0.218			F= 1.756			F=20.875**		
2-3: T	3.0	4.2	2	7.5	9.1	11	5.5	7.8	2	7.8	7.2	18	7.2	7.6	33
NT	3.8	2.5	13	2.6	1.3	10	3.9	3.6	16	2.6	2.1	9	3.4	2.7	48
R	2.7	2.1	119	1.0	0.7	5	2.4	1.9	106	1.0	0.8	4	2.5	2.0	234
	F= 1.712			F= 2.623			F= 4.515*			F= 3.889*			F=32.821**		
4-5: T	12.4	9.9	5	7.2	5.9	14	1.3	1.5	3	2.7	2.3	10	6.1	6.5	32
NT	2.1	1.5	11	4.2	2.4	10	5.3	2.8	17	4.0	1.9	9	4.1	2.5	47
R	3.9	2.5	112	1.0	0.8	4	3.7	2.6	122	0.8	0.8	5	3.7	2.6	243
	F=21.882**			F= 3.392*			F= 4.167*			F= 4.291*			F= 8.076**		

Negro boys, and in two of the three grade groupings of Negro girls and of white boys. White girls in grades K-1 and 4-5 show a significant reversal, with transfer families having the least longevity. However, the number of cases here is too small to permit generalization. Relationships between years residence at present address and the preceding residential variables are predictably positive but modest ($\underline{r}$ = .47 and .30, respectively, for Ann Arbor and Michigan residence).

Generally speaking, differences in residential characteristics for the transfer, nontransfer, and receiving-school families are not striking and substantial variability is noted within each group. The findings here may be most important in suggesting that the transfer population, as such, is not extraordinarily mobile,[1] as is often reported to be the case for less advantaged populations. It must be recognized, of course, that the reference point provided by a university community is not a typical one.

School Changes

Additional data bearing on the question of mobility comes from a tally of school changes for a substantial portion of the population, gathered in conjunction with another study. Though there is considerable variability within each group, the mean number of per-pupil school changes is very similar for transfer, nontransfer, and receiving-school pupils. Means are as follows: for grades K-1, 0.4, 0.7 and 0.5, respectively; for grades 2-3, 1.3, 1.1, and 1.2; for grades 4-5, 1.1, 0.7, and 1.7.

3. Family Structure

Several measures were obtained in an effort to generate a picture of family context -- the functional family unit of which the pupils are a part. Included are family size, residential "density," and family intactness.

Family Size

Tables 4-7 and 4-8 present data for two variables re-

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[1] It will be recalled that the data for pupils' birthplace and for pre-Ann Arbor residence suggested considerable residential stability among southern families in the transfer population.

Table 4-7. NUMBER OF SIBLINGS

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	3.0	1.2	4	3.5	2.5	15	2.5	3.5	2	4.3	2.7	19	3.8	2.5	40
NT	2.7	1.9	35	3.9	2.8	19	2.5	1.4	34	3.6	3.0	27	3.1	2.3	115
R	2.2	1.5	278	3.4	1.3	12	2.4	1.7	269	2.5	1.2	8	2.3	1.6	567
	F= 1.858			F= 0.216			F= 0.092			F= 1.238			F=18.477**		
2-3: T	2.0	2.0	3	4.4	3.4	14	2.5	3.5	2	4.7	2.8	22	4.3	3.0	41
NT	2.6	1.8	28	3.4	1.9	20	2.7	1.7	35	4.5	2.2	32	3.3	2.1	115
R	2.5	1.6	285	2.7	1.5	9	2.4	1.5	274	2.1	1.6	9	2.5	1.5	577
	F= 0.217			F= 1.552			F= 0.313			F= 4.363*			F=29.587**		
4-5: T	2.4	1.1	5	4.1	2.3	16	5.3	2.5	3	4.6	2.4	10	4.1	2.3	34
NT	2.4	1.4	34	3.3	2.8	25	2.0	1.2	30	3.7	2.7	23	2.8	2.1	112
R	2.5	1.5	219	2.5	1.2	6	2.7	1.7	234	2.3	2.1	7	2.6	1.6	466
	F= 0.013			F= 1.053			F= 5.968**			F= 1.740			F=12.050**		

Table 4-8. NUMBER OF PEOPLE RESIDING IN THE HOME

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	4.0	1.2	4	7.1	3.2	15	5.0	4.2	2	7.5	2.7	19	6.8	3.0	40
NT	5.6	1.9	35	6.3	2.3	19	5.4	1.5	34	6.4	2.3	27	5.9	2.0	115
R	5.1	1.3	278	6.4	1.5	11	5.2	1.5	269	6.0	1.7	8	5.2	1.4	566
	F= 3.482*			F= 0.471			F= 0.219			F= 1.475			F=23.403**		
2-3: T	3.0	1.0	3	6.4	2.4	14	5.5	3.5	2	7.2	2.2	22	6.6	2.5	41
NT	5.6	1.9	28	6.3	2.2	20	5.4	1.7	35	7.0	1.6	32	6.1	1.9	115
R	5.4	1.4	286	5.2	1.6	9	5.3	1.5	274	4.6	1.9	9	5.3	1.5	578
	F= 4.298*			F= 0.966			F= 0.021			F= 7.052**			F=18.302**		
4-5: T	4.4	1.8	5	6.8	2.8	16	5.3	2.5	3	7.3	3.2	10	6.5	2.8	34
NT	5.2	1.4	34	5.7	2.5	25	4.8	1.4	30	6.0	1.9	23	5.4	1.8	112
R	5.3	1.4	219	5.7	1.5	6	5.4	1.6	235	5.1	2.3	7	5.4	1.5	467
	F= 1.003			F= 1.071			F= 1.777			F= 1.898			F= 7.107**		

lating to family size: number of siblings, and number of people residing in the home. The two are not unrelated ($\underline{r}$ = .86); the latter, however, describes an operating family unit which may be considerably broader than the conventional parent-child unit.

For both variables, a consistent and significant pattern is seen among the three populations as a whole, with transfer pupils having the largest families and receiving-school pupils, the smallest. The same pattern holds generally for Negro pupils, though it is significant only in the case of Negro girls in grades 2-3. For white pupils, on the other hand, there is no evident pattern associated with group membership. It is noteworthy, however, that family size (as defined by these two variables) is generally smaller for whites than for Negroes.

Residential Density

A measure of residential "density" is provided by M. Deutsch's "crowding index," obtained by dividing the number of rooms in the home by the number of occupants. Thus, the larger the index value, the more densely populated the home. Here, for convenience, index values have been multiplied by 100.

Table 4-9 shows that the transfer population as a whole has significantly larger index values than the non-transfer and receiving-school groups. The latter has the lowest index values except for grades 4-5, where the mean is identical to that for the nontransfer group.

When the three populations are divided by sex and race, no consistent pattern is evident and no significant differences occur. In nearly every instance, however, index values for Negro families are greater than those for their white counterparts.

Family Intactness

Two indicators of family intactness were examined: parents' marital status and the incidence of one- vs. two-parent families. The two are closely related, of course, and the first is dealt with only briefly.

For the present purpose, a marriage was considered intact if mother and father were living together. Percentages of intact marriages within the transfer, nontransfer, and

Table 4-9. CROWDING INDEX

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	6.3	1.2	3	10.8	3.6	15	13.0	0.0	1	11.1	4.2	18	10.6	3.9	37
NT	9.1	2.3	23	10.9	3.9	10	8.4	2.3	29	11.6	4.4	15	9.6	3.2	77
R	8.2	2.3	162	11.6	2.3	5	8.8	2.9	180	13.0	4.2	2	8.6	2.7	349
	F= 2.459			F= 0.097			F= 0.413			F= 0.195			F=10.480**		
2-3: T	4.5	0.7	2	12.8	6.8	12	10.5	3.5	2	11.7	3.6	18	11.6	5.1	34
NT	8.3	2.2	24	10.7	5.1	11	8.1	1.9	29	10.8	3.3	14	9.0	3.1	78
R	8.6	3.1	175	8.5	2.1	2	8.9	2.9	148	8.7	4.0	3	8.7	3.0	328
	F= 1.843			F= 0.647			F= 1.329			F= 1.012			F=12.231**		
4-5: T	7.2	3.8	5	11.5	3.5	12	8.3	4.2	3	12.1	4.1	10	10.7	4.1	30
NT	8.2	1.9	29	10.8	3.9	11	7.8	2.2	22	9.5	2.4	13	8.7	2.6	75
R	8.5	2.5	117	10.0	0.0	1	8.9	2.6	128	13.0	0.0	1	8.7	2.6	247
	F= 0.772			F= 0.195			F= 1.657			F= 3.603			F= 7.000**		

receiving-school populations are 68, 82, and 93, respectively. As with several other demographic variables discussed previously, the differences here appear to reflect the differing racial compositions of the three groups. Among parents of white pupils, 93 percent are described as having intact marriages; the corresponding figure for Negro parents is 69 percent.

The incidence of one- vs. two-parent homes is shown in Table 4-10. A two-parent home, here, is one in which there is a constant mother figure and a constant father figure, regardless of the relationship of these two persons to the child. In most instances, the child's natural mother and father comprise the unit; other patterns do occur, however (e.g., mother and stepfather, father and female relative other than the child's mother, father and housekeeper). These other patterns are sufficiently infrequent, however, to warrant no more than the mention here of their existence.

It can be seen in the table that family intactness is greatest in the receiving-school population (95%), somewhat less in the nontransfer group (83%), and least in the transfer group, where not quite three fourths of the pupils live with both parents. Once again, Negro-white differences are the most prominent, with nearly a third of the Negro children and only 5 percent of the white children living in one-parent families. Finally, of 178 children in the total pupil population who live with one parent only, all but nine live with the mother or mother-surrogate. These figures alone lend some support to the stereotype of the matriarchal character of the Negro family; other relevant data, such as the role relationships of mother and father in two-parent families, were not available to us.

4. Parent Education and Occupation

The last demographic variables to be examined are parent education and parent occupation. Both are important indicators of family socioeconomic status, and the only two such indicators available to us. Hopes to obtain a third socioeconomic measure -- family income -- were abandoned in the absence of any means for verifying such information as might be obtained. Accurate information was viewed as particularly critical here, inasmuch as socioeconomic status is one of several criteria for the matching of transfer and nontransfer groups.

Table 4-10. NUMBER OF PUPILS LIVING WITH ONE VS. BOTH PARENTS[a]

Group	White boys		Negro boys		White girls		Negro girls		Total[b]	
	One	Both	One	Both	One	Both	One	Both	One	Both
K-1: T	1	3	4	12	1	1	5	18	11 (24%)	34 (76%)
NT	2	33	6	13	2	32	10	16	20 (18%)	94 (82%)
R	14	266	3	6	11	259	1	5	29 (5%)	536 (95%)
2-3: T	2	1	6	12	0	2	6	18	14 (30%)	33 (70%)
NT	0	28	6	12	4	31	9	14	19 (18%)	85 (82%)
R	8	273	2	3	11	262	3	3	24 (4%)	541 (96%)
4-5: T	1	4	5	12	2	1	2	8	10 (29%)	25 (71%)
NT	2	32	9	16	3	27	3	20	17 (15%)	95 (85%)
R	14	190	3	3	17	225	0	5	34 (7%)	423 (93%)
% all grades:	5	95	33	67	6	94	27	73	9	91

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[a] "Parent" here refers to parent figure as defined in text (p. 64).

[b] Overall percent by population: transfer (n = 127), 28% one parent, 72% both parents; nontransfer (n = 330), 17% one parent, 83% both parents; receiving schools (n = 1597), 5% one parent, 95% both parents.

Parent Education

Tables 4-11 and 4-12 present data for parent education. Looking first at the totals, a clear and significant pattern emerges for both fathers and mothers, showing the least formal education among parents of the transfer pupils, the most among receiving-school parents, and parents of the nontransfer pupils somewhere between. Mothers and fathers are comparably educated in the transfer group, where the hypothetical "average" parent has some high school education but is not a graduate,[1] and in the nontransfer group, where the average parent has some training beyond high school. Receiving-school fathers, however, tend to have somewhat more formal education than their wives, approaching the college degree level.

The same pattern tends to prevail when the groups are divided by sex and race, although there are exceptions. And apart from white fathers (4 of 6 comparisons significant), educational differences among these subsets of parents from the three groups are rarely greater than one might expect by chance. Only two of the 12 comparisons are significant for Negroes: one (fathers of boys in grades 2-3) follows the general pattern described above, while the other (mothers of girls in grades 4-5) represents a partial reversal, with nontransfer mothers having the highest mean score.

Parent Occupation

Tables 4-13 and 4-14 present data for parent occupation. For fathers, a general pattern appears which parallels the pattern observed for parent education: fathers of transfer pupils hold jobs scaled at a lower status level[2] than fathers

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[1] Education was coded as follows: 1, less than 8th grade; 2, 8th grade or more but not a high school graduate; 3, high school graduate; 4, some college or technical training beyond high school but no degree; 5, college graduate; 6, postgraduate education.

[2] Occupational codes were taken from Methodology and scores of socioeconomic status: working paper #15, Washington, D.C.: Bureau of the Census, 1963. Scale values, based on the combined average levels of income and education for males in all occupations in 1950, range from 1 (personal services) to 99 (dentists, physicians). A value of 0 was used to designate no employment outside the home (including housewives).

Table 4-11. FATHER'S EDUCATION

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	2.8	1.0	4	2.4	1.1	14	2.5	0.7	2	2.6	1.5	16	2.5	1.2	36
NT	4.2	1.4	34	2.6	0.9	16	3.9	1.6	32	2.5	0.9	19	3.6	1.5	101
R	4.6	1.4	267	3.2	1.6	10	4.5	1.5	265	3.6	1.7	7	4.5	1.4	549
	F= 4.407*			F= 1.541			F= 3.691*			F= 1.743			F=45.344**		
2-3: T	3.7	0.6	3	2.0	1.0	11	1.5	0.7	2	2.3	1.5	19	2.3	1.3	35
NT	3.9	1.6	28	3.2	1.4	17	4.1	1.4	32	2.6	0.8	27	3.5	1.4	104
R	4.6	1.5	276	3.8	1.6	5	4.5	1.5	265	3.0	1.1	8	4.5	1.5	554
	F= 3.700*			F= 4.141*			F= 4.965**			F= 1.241			F=54.804**		
4-5: T	3.2	1.3	5	2.6	1.2	14	2.0	0.0	2	1.7	1.0	9	2.4	1.2	30
NT	4.1	1.5	33	2.5	0.8	21	4.2	1.4	28	2.7	1.1	18	3.5	1.5	100
R	4.3	1.4	209	2.2	1.0	4	4.3	1.5	229	3.2	1.9	4	4.3	1.5	446
	F= 1.768			F= 0.251			F= 2.459			F= 3.067			F=30.549**		

Table 4-12. MOTHER'S EDUCATION

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	2.8	1.0	4	2.5	1.1	15	2.5	0.7	2	2.5	0.8	19	2.5	0.9	40
NT	3.6	1.3	34	2.6	0.8	19	3.5	1.4	34	2.5	0.7	25	3.2	1.2	112
R	3.9	1.1	272	2.9	1.1	11	3.7	1.1	266	2.8	1.0	8	3.8	1.1	557
	F= 2.994			F= 0.638			F= 1.865			F= 0.405			F=36.163**		
2-3: T	4.0	0.0	3	2.6	1.1	14	2.0	0.0	2	2.3	0.5	22	2.5	0.8	41
NT	3.7	1.2	28	2.8	1.2	19	3.6	1.1	33	3.0	0.9	30	3.3	1.1	110
R	3.9	1.1	279	2.9	1.1	8	3.8	1.2	267	2.6	1.1	10	3.8	1.2	564
	F= 0.257			F= 0.226			F= 2.943			F= 4.302*			F=29.966**		
4-5: T	2.8	1.3	5	2.6	0.6	14	2.0	0.0	3	1.8	0.9	10	2.3	0.9	32
NT	3.7	1.5	33	2.7	1.2	25	3.6	1.2	30	3.0	1.0	22	3.3	1.3	110
R	3.7	1.2	211	2.4	0.5	5	3.6	1.2	232	2.4	0.5	5	3.7	1.2	453
	F= 1.360			F= 0.169			F= 2.891			F= 4.993*			F=20.669**		

Table 4-13. FATHER'S OCCUPATION

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	27.5	11.0	4	44.4	21.8	13	35.0	24.0	2	42.9	24.4	15	41.2	22.0	34
NT	77.6	17.4	35	44.1	18.2	15	78.7	17.3	32	37.1	22.7	19	65.3	25.8	101
R	80.6	21.3	270	48.8	28.6	10	80.1	22.1	257	61.0	37.4	6	79.5	22.5	543
	F=12.993**			F= 0.154			F= 4.321*			F= 1.964			F=56.241**		
2-3: T	56.3	33.5	3	45.0	24.7	10	9.0	12.7	2	38.4	22.4	17	40.3	24.7	32
NT	76.5	18.0	28	47.3	24.2	14	78.4	18.4	32	38.6	21.0	23	63.9	26.3	97
R	80.6	22.4	275	53.0	40.7	7	78.9	24.3	264	48.1	34.0	7	79.0	24.1	553
	F= 2.157			F= 0.165			F= 8.644**			F= 0.497			F=49.558**		
4-5: T	53.0	25.6	5	33.4	19.4	13	19.3	20.0	3	35.7	21.4	9	35.9	21.9	30
NT	75.1	17.9	32	36.8	20.2	18	78.3	20.0	27	45.8	23.2	17	63.4	26.3	94
R	77.9	22.8	208	32.4	27.2	5	77.9	21.6	224	60.0	30.1	5	77.2	22.8	442
	F= 3.200*			F= 0.147			F=11.067**			F= 1.691			F=52.621**		

Table 4-14. MOTHER'S OCCUPATION

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	32.0	0.0	2	33.6	33.9	15	36.5	51.6	2	26.7	29.5	18	30.3	30.7	37
NT	20.3	35.0	32	20.6	25.2	19	37.1	39.3	33	17.8	20.2	24	24.9	32.8	108
R	16.4	32.0	262	20.2	27.5	10	16.4	30.9	252	23.2	32.6	6	16.6	31.4	530
	F= 0.426			F= 1.023			F= 6.397**			F= 0.628			F= 5.821**		
2-3: T	64.0	27.8	3	21.3	27.4	13	16.0	22.6	2	17.7	21.7	22	22.3	26.2	40
NT	24.7	34.8	28	27.9	28.3	17	25.1	35.6	35	28.7	25.0	27	26.3	31.5	107
R	13.8	29.5	272	11.8	24.0	8	14.6	29.3	258	32.2	32.0	8	14.4	29.4	546
	F= 5.692**			F= 0.978			F= 1.870			F= 1.578			F= 8.065**		
4-5: T	52.6	34.0	5	21.2	21.5	16	23.3	20.6	3	17.1	20.9	10	24.8	25.2	34
NT	26.7	34.6	33	24.6	30.8	23	19.8	31.5	29	24.0	27.0	19	23.8	31.3	104
R	19.4	32.7	204	16.0	14.0	5	19.2	33.0	220	37.0	33.2	4	19.4	32.6	433
	F= 3.027			F= 0.245			F= 0.028			F= 0.842			F= 1.118		

of nontransfer pupils, while fathers of receiving-school pupils hold positions of higher status than either of the other two groups.

This pattern is consistent and, with a single exception, significant for totals and for fathers of white boys and girls. It is not consistent among Negro fathers, although Negro fathers of receiving-school pupils tend to be employed in higher status positions than Negro fathers in the transfer and nontransfer groups. However, differences among Negro fathers in the three groups are in no case greater than might be expected to occur by chance.

For mothers, there is no clear pattern of occupational difference among the three populations. A tendency is apparent, in the totals and among white mothers, for the lowest occupational scores to occur in the receiving-school group. This, it should be noted, is a function of the relatively greater number of receiving-school mothers (predominantly white) who are not employed outside the home and are, therefore, coded "0" for occupation.[1] This tendency does not hold for Negro mothers, nor are there significant occupational differences among Negro mothers in the three populations.

In the combined populations, education and occupational status are substantially correlated for fathers ($\underline{r} = .66$) and uncorrelated for mothers ($\underline{r} = .08$), the latter again reflecting the large number of "0" codes for mother's occupation.

5. Summary

The three populations studied are, for the most part, midwest-born children of native-born American parents who have resided in the state of Michigan for at least 15 years or so, on the average. Such demographic differences as are observed between the populations are generally greatest between the predominantly Negro transfer group and the predominantly white receiving-school group; the nontransfer group, with roughly a 50-50 racial split, typically falls somewhere between the other two on these measures.

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[1] Percentages of mothers employed outside the home are as follows: transfer group, 72%; nontransfer group, 48%; receiving-school group, 23%. Comparable figures for Negro and for white mothers are 64% and 25%, respectively.

Within the framework of that general pattern, population characteristics can be summarized as follows. Relative to the other two groups, a greater number of transfer parents were born in the South, and fewer in the Midwest. More of the transfer families came to this community directly from the South; however, these families have lived at the same Ann Arbor address several years longer, on the average, than families in the other two groups. The transfer families are slightly larger, their homes somewhat more densely populated. A majority of transfer pupils live with both parents, but broken homes are more prevalent in this group than in the other two. Finally, transfer parents have slightly less formal education, and hold slightly less prestigeful jobs; more of the transfer mothers are employed outside the home.

As expected, no consistent differences appear between boys and girls, or across grades, on the demographic variables. Differences between whites and Negroes, on the other hand, are evident on virtually all measures differentiating the three populations and are greater, on the whole, than those between the three populations. The direction of difference strongly suggests that differences observed between the transfer, nontransfer, and receiving-school groups are largely a function of the differing racial compositions of those groups. Indeed, when the demographic data are examined within the four race-sex groupings (white boys, Negro boys, white girls, Negro girls), differences between the three major populations become minimal, or inconsistent, or they vanish altogether. There is not one demographic variable on which the three populations differ consistently and significantly, across all grades, when the data are examined within racial groups.

Chapter 5

PUPIL HEALTH, SCHOOL ATTENDANCE, AND SPECIAL PROBLEMS

The present chapter deals with a variety of factors which may limit, in a very direct sense, a child's ability to profit from instruction. The data presented here were gathered principally from routine school records; exceptions are noted in the text.

1. Health and Physical Fitness

Several indices of pupil health and general physical condition were examined. Included are teachers' observation of health problems and related behavioral symptoms, the results of screening tests for vision and hearing, height and weight, and physical fitness as assessed annually in the elementary physical education program.

Health Problems and Behavioral Symptoms

A part of each child's school record consists of two checklists which are completed by the classroom teacher. One of these is concerned with the child's general physical condition, the other with related behavioral symptoms. The former contains six items: thin, fat, appears unwell, tires easily, poor muscle coordination, and bad posture. The behavioral symptoms list includes eight items: emotional disturbances, twitching, nervousness, undue restlessness, nail biting, excessive use of toilet, poor sleep habits, and poor food habits.

The frequency of entries on these two lists for the posttransfer year is summarized in Tables 5-1 and 5-2, respectively. In these tables, the transfer, nontransfer, and receiving-school populations are classified as to the numbers of pupils exhibiting one, and more than one, of the problems or symptoms listed.

As Table 5-1 shows, the incidence of reported health problems is greatest, proportionally, in the transfer group, except at grades 4-5. Nearly a fifth of the K-1 transfer pupils, and close to a third of those in grades 2-3, are described as having one or more of the problems listed. Comparative figures for the nontransfer and receiving-school pupils range around 10 percent. This figure also holds for

Table 5-1. INCIDENCE OF HEALTH PROBLEMS AS REPORTED BY TEACHER

Group	White boys		Negro boys		White girls		Negro girls		Total[a]	
	1	>1	1	>1	1	>1	1	>1	1	>1
K-1: T	0	0	4	0	4	4	2	1	6 (15%)	1 (3%)
NT	4	0	1	0	1	2	3	2	9 (8%)	4 (4%)
R	26	13	1	0	16	8	0	0	43 (8%)	21 (4%)
2-3: T	0	0	2	4	0	1	4	1	6 (15%)	6 (15%)
NT	1	3	3	0	1	1	1	1	6 (5%)	5 (4%)
R	29	6	1	0	19	7	0	0	49 (9%)	13 (2%)
4-5: T	0	0	0	1	0	0	1	0	1 (3%)	1 (3%)
NT	2	0	0	0	0	0	1	0	3 (3%)	0 (0%)
R	17	6	0	0	21	2	0	0	38 (8%)	8 (2%)
% all grades:	9	3	9	4	7	2	8	3	8	3

Note.-- Except where otherwise indicated, column entries are *numbers* of pupils with one (1) and more than one (>1) health problem reported.

[a] Overall percent by population: transfer (*n* = 113), 12% and 7%, respectively; non-transfer (*n* = 341), 5% and 3%; receiving schools (*n* = 1598), 8% and 3%.

Table 5-2. INCIDENCE OF BEHAVIORAL SYMPTOMS AS REPORTED BY TEACHER

Group	White boys		Negro boys		White girls		Negro girls		Total[a]	
	1	>1	1	>1	1	>1	1	>1	1	>1
K-1: T	1	1	3	7	0	0	3	1	7 (18%)	9 (23%)
NT	6	3	3	3	3	4	4	2	16 (14%)	12 (10%)
R	34	29	0	3	26	14	0	1	60 (11%)	47 (8%)
2-3: T	1	0	5	4	0	1	3	5	9 (22%)	10 (25%)
NT	3	8	2	5	5	3	3	5	13 (11%)	21 (18%)
R	40	36	1	2	17	11	1	0	59 (10%)	49 (9%)
4-5: T	1	0	1	2	0	1	2	1	4 (12%)	4 (12%)
NT	3	0	0	3	2	0	1	2	6 (5%)	5 (4%)
R	25	18	2	2	14	6	0	0	41 (9%)	26 (6%)
% all grades:	13	8	12	23	8	5	11	11	10	9

Note.--Except where otherwise indicated, column entries are numbers of pupils with one (1) and more than one (>1) behavioral symptoms reported.

[a] Overall percent by population: transfer (n = 113), 19% and 20%, respectively; nontransfer (n = 341), 10% and 11%; receiving schools (n = 1598), 10% and 8%.

the latter group at grades 4-5, where, however, the incidence drops sharply for both transfer and nontransfer pupils (6% and 3%, respectively).

A somewhat similar pattern is observed for behavioral symptoms (Table 5-2), although there are some important differences. Here, more of the transfer pupils are reported to have multiple problems than single problems, while the reverse is generally true for nontransfer and receiving-school pupils. Here, the incidence among transfer pupils in grades 4-5, though about half that reported for the earlier grades, is still substantially higher than the incidence in the other two populations. Here, too, the incidence is relatively greater among nontransfer pupils than among receiving-school pupils, except at grades 4-5.

It is noteworthy that behavioral symptoms are reported with greater frequency for all groups than are health problems, and that sex and race differences, inconspicuous for health problems, do appear in the distribution of behavioral symptoms. The latter are generally more prevalent in boys than in girls, and among Negro pupils, who are more often characterized by multiple problems than are white pupils. Thus, the highest incidence of reported behavioral symptoms occurs among Negro boys, (35%), the lowest among white girls (13%), with white boys and Negro girls falling midway between (21% and 22%, respectively).

Vision and Hearing

The results of routine visual acuity tests were available for most pupils, and are reported in Table 5-3. In the table, minor acuity problems are distinguished from those serious enough to warrant referral to a physician.

As the table shows, both minor and more serious acuity problems have the highest incidence in the transfer population, occurring in a ratio of about 3 to 2 relative to the nontransfer and receiving-school populations. In the transfer group, the more serious problems are concentrated in the earlier grades, whereas they are distributed about equally across grade levels in the nontransfer group and are more prevalent at higher grade levels in receiving-school pupils. Reported acuity problems are more frequent in girls than in boys, and among Negro pupils. Thus, the highest incidence occurs among Negro girls (35%), the lowest among white boys (16%).

Table 5-3. INCIDENCE OF VISUAL ACUITY PROBLEMS

Group	White boys		Negro boys		White girls		Negro girls		Total[a]	
	1	2-3	1	2-3	1	2-3	1	2-3	1	2-3
K-1: T	0	0	3	0	--[b]	--[b]	4	5	7 (21%)	5 (15%)
NT	4	1	3	3	0	0	5	2	12 (14%)	6 (7%)
R	15	7	2	0	20	14	2	0	39 (8%)	21 (4%)
2-3: T	1	0	1	0	1	0	2	5	5 (14%)	5 (14%)
NT	0	1	2	1	2	1	5	2	9 (10%)	5 (6%)
R	25	17	1	2	34	32	0	1	60 (11%)	52 (10%)
4-5: T	1	0	2	1	1	0	5	1	9 (29%)	2 (6%)
NT	1	1	4	2	2	2	2	1	9 (12%)	6 (8%)
R	35	19	0	0	35	28	1	1	71 (17%)	48 (11%)
% all grades:	10	6	17	9	12	10	21	14	12	8

Note.--Except where otherwise indicated, column entries are numbers of pupils with minor (1) and more serious (2-3) acuity problems.

[a] Overall percent by population: transfer (n = 102), 21% and 12%, respectively; nontransfer (n = 247), 12% and 7%; receiving schools (n = 1455), 12% and 8%.

[b] No entries this cell.

The results of audiometric screening tests, conducted by the Washtenaw County Health Department, were available for about a third of the pupils participating in the study. Among those pupils, normal hearing was reported for all in the transfer group (*n* = 38), 95 percent of the nontransfer group (*n* = 166), and 96 percent of the receiving-school group (*n* = 611). Of those children exhibiting hearing difficulties, most had only a slight deficit in one ear. Only five pupils (two nontransfer, three from receiving schools) showed a serious loss in one ear or involvement of both ears.

Height and Weight

Average height and weight for the three populations, for both pre- and posttransfer years, are shown in Tables 5-4 and 5-5. Within grade groups, no consistent differences for sex or race appeared for either measure, so only total population values are reported.

Comparisons with respect to height give a slight advantage -- about an inch, on the average -- to the nontransfer group, except at kindergarten level. For six of ten comparisons in grades 1-5, this difference in height is statistically significant. The average heights of transfer and receiving-school pupils are virtually identical, for both years, except at the extremes of the grade span. At the kindergarten level, transfer pupils tended to be slightly taller than nontransfer and receiving-school pupils; at grade 5, they were slightly shorter, on the average, than the other two groups. These differences are not statistically significant, however. Finally, growth appeared to be similar in the three groups, with an average gain in height of about three inches over the one-year period of the study.

As would be expected, weight comparisons show much greater variance within groups, and only at grade 2 are significant differences found in average weight. As was found for height, however, except at kindergarten level, average weight was slightly greater for the nontransfer group. Comparison of pre- and posttransfer average weights suggest that transfer pupils generally gained a little less during this period than pupils in the other two groups.

It is important to note that the time of year when pupils are weighed and measured is not necessarily uniform across schools, or even from class to class within schools. It is possible, then, that the small differences observed

Table 5-4. HEIGHT IN INCHES: PRE- AND POSTTRANSFER YEARS

Group	Pretransfer year			Posttransfer year		
	Mean	σ	n	Mean	σ	n
K: T	46.0	2.8	20	48.2	2.8	14
NT	45.1	2.2	50	47.1	2.6	47
R	45.0	2.3	196	47.5	1.9	194
	F= 1.760			F= 1.686		
1: T	46.8	2.9	6	49.7	2.8	15
NT	48.2	2.5	49	50.2	2.0	54
R	46.9	2.2	199	49.7	2.3	205
	F= 6.175**			F= 0.807		
2: T	49.1	3.1	29	51.1	3.1	21
NT	50.6	2.4	49	53.3	2.3	57
R	49.1	2.1	249	52.1	2.4	238
	F=10.054**			F= 8.203**		
3: T	51.9	2.4	12	54.5	2.5	13
NT	52.8	2.4	52	55.5	2.9	56
R	51.9	2.6	199	54.3	2.8	223
	F= 2.806			F= 4.429*		
4: T	54.5	2.7	15	57.2	3.2	12
NT	55.9	2.1	34	58.2	2.6	50
R	54.6	2.8	118	57.0	2.9	171
	F= 3.680*			F= 3.754*		
5: T	55.4	3.3	19	58.1	3.7	16
NT	56.5	3.0	46	59.4	2.6	48
R	55.8	2.3	187	58.7	2.5	226
	F= 1.731			F= 2.293		

Table 5-5. WEIGHT IN POUNDS: PRE- AND POSTTRANSFER YEARS

Group	Pretransfer year			Posttransfer year		
	Mean	σ	n	Mean	σ	n
K: T	47.4	6.0	20	50.9	8.1	14
NT	46.7	7.0	50	51.1	8.2	47
R	45.7	6.2	195	50.7	7.2	193
		F= 1.067			F= 0.063	
1: T	52.0	6.9	6	57.8	13.4	15
NT	52.7	6.9	48	60.3	8.8	51
R	50.3	7.4	198	58.0	9.6	205
		F= 2.071			F= 1.266	
2: T	54.6	9.9	27	59.7	9.7	21
NT	59.9	7.5	49	67.8	9.5	56
R	56.2	8.4	249	65.8	11.7	239
		F= 4.750**			F= 4.086*	
3: T	63.5	9.4	12	73.1	13.3	13
NT	65.1	11.7	52	74.5	14.1	56
R	63.7	11.8	197	73.4	14.3	222
		F= 0.316			F= 0.136	
4: T	70.6	8.5	15	82.8	14.9	12
NT	79.1	12.6	34	91.7	15.4	50
R	75.1	16.0	116	85.6	18.7	173
		F= 1.875			F= 2.599	
5: T	84.6	19.3	18	94.5	23.7	15
NT	85.6	20.8	46	98.2	23.7	49
R	79.4	16.6	187	92.7	20.1	227
		F= 2.741			F= 1.395	

in the data reflect no more than a time difference in data collection. They do not, it should be noted, reflect age differences in the three populations. Significant age differences occur only at grade 4, where pretransfer chronological age averages 123 months in the transfer group, 122 months in the nontransfer group, and 120 months in the receiving-school group.[1] The practical significance of those differences is probably negligible.

Physical Fitness

Beginning in grade 4, physical fitness data are regularly gathered by the public school physical education staff as part of an annual spring field event. During the spring preceding the transfer, this effort was extended downward to include first- and second-grade physical education classes in the transfer and nontransfer schools.[2]

The six events on which data were collected include the 600-yard run-walk, a measure of respiratory-circulatory endurance; the shuttle run, a measure of agility; the standing broad jump, which reflects explosive leg strength; sit-ups, measuring abdominal strength; and pull-ups (boys) and the bent arm hang (girls), both measures of shoulder girth strength.

Absences on the days these special activities were scheduled resulted in considerable missing data; make-up sessions for absentees were not feasible. Thus, n's are relatively small for the comparisons described here.

Mean performance levels of first- and second-graders on four of the six events are shown in Table 5-6. Not shown in

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[1] Three other significant age differences appeared in the pretransfer data, but are not present for the posttransfer year, where group composition was altered somewhat by move-ins, move-outs, and the sampling procedure utilized in receiving schools. Those small differences in the pretransfer year involved white girls in grade 5 (T>NT and R), Negro girls in grade 3 (R>NT>T), and the total group in grade 2 (T>NT>R).

[2] The third-grade transfer class was inadvertently omitted from this special data collection. Kindergarten pupils did not have regular physical education classes and, hence, could not be included.

Table 5-6. PHYSICAL FITNESS DATA: GRADES 1-2

Measure	Group	White boys			Negro boys		
		Mean	σ	n	Mean	σ	n
600-YD. RUN-WALK (time, sec.)	1: T	151.0	11.3	2	169.3	14.5	10
	NT	196.2	28.1	22	191.9	31.1	8
		F= 4.945*			F= 4.195		
	2: T	155.0	7.1	2	154.7	24.2	13
	NT	214.8	48.2	14	212.3	52.3	11
		F= 2.896			F=12.636**		
SHUTTLE RUN (time, .1 sec.)	1: T	136.0	10.4	3	131.7	14.1	12
	NT	135.4	9.4	17	127.0	6.3	5
		F= 0.010			F= 0.492		
	2: T	119.0	2.8	2	119.8	9.4	16
	NT	133.3	16.7	15	129.8	15.6	11
		F= 1.370			F= 4.369*		
STANDING BROAD JUMP (inches)	1: T	44.7	6.1	3	48.7	4.6	12
	NT	41.9	7.0	20	44.6	8.0	8
		F= 0.418			F= 2.080		
	2: T	48.0	0.0	2	53.5	6.0	15
	NT	46.2	5.7	13	48.6	6.9	11
		F= 0.194			F= 3.670		
SIT-UPS (no. correct in sequence)	1: T	25.0	7.1	2	59.0	46.4	12
	NT	22.0	15.8	20	14.1	12.1	7
		F= 0.066			F= 6.164*		
	2: T	21.0	25.5	2	62.5	29.9	16
	NT	20.8	12.0	14	19.2	8.5	11
		F= 0.000			F=21.688**		

Table 5-6 (continued)

Group	White girls[a]			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n
1: T	210.0	0.0	1	195.5	46.3	12	182.0	36.6	25
NT	197.9	20.6	16	195.5	23.2	13	195.9	25.0	59
					F= 0.000			F= 4.061*	
2: T	210.0	0.0	1	173.5	37.0	18	166.3	32.6	34
NT	221.1	24.1	17	211.3	29.3	16	215.2	37.6	58
					F=10.721**			F=39.843**	
1: T	138.0	0.0	1	139.2	18.7	13	135.7	15.7	29
NT	148.4	11.2	11	144.6	14.0	11	140.0	12.8	44
					F= 0.643			F= 1.651	
2: T	136.0	0.0	1	121.8	7.9	18	121.2	8.6	37
NT	135.1	10.6	15	137.6	13.5	18	134.4	14.1	59
					F=18.339**			F=26.614**	
1: T	39.0	0.0	1	46.0	7.2	13	46.7	6.1	29
NT	36.2	4.8	13	40.9	5.8	14	40.7	6.8	55
					F= 4.167			F=15.962**	
2: T	34.0	0.0	1	47.4	4.4	18	49.6	6.3	36
NT	46.1	6.0	16	45.1	6.2	19	46.3	6.1	59
					F= 1.739			F= 6.454*	
1: T	10.0	0.0	1	54.3	34.5	13	52.6	39.4	28
NT	14.5	16.1	13	14.4	8.2	14	17.2	14.0	54
					F=17.671**			F=35.442**	
2: T	22.0	0.0	1	36.6	23.9	18	46.6	29.6	37
NT	22.7	14.3	16	31.0	15.5	19	24.2	13.9	60
					F= 0.725			F=25.314**	

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[a] F's not computed where *n* for a row = 1.

the table are the measures of shoulder girth strength, which produced no significant differences between transfer and nontransfer boys, and a single significant difference for girls: first-grade Negro girls in the transfer group outperformed their counterparts in the nontransfer group on the bent arm hang ($p<.05$). For all other fitness measures, first- and second-grade transfer pupils demonstrated a fairly consistent advantage over the nontransfer pupils, with 15 of 32 comparisons significant.[1] Overall differences between the two populations are significant for all four measures and at both grade levels, with a single exception (the shuttle run at grade 1).

Inspection of Table 5-6 indicates that Negro pupils generally outperformed white pupils in grades 1-2, and that boys in nearly all cases outperformed girls. However, several significant differences appear within race-sex groups, and all but one of them within the Negro groups, where both boys and girls in the transfer group showed significantly better performance on several of the fitness measures.

The data for grades 4-5 are reported as total fitness points, based on overall performance on the separate events. These data, shown in Table 5-7, reveal the same trends evident in grades 1-2 with respect to race and sex differences. In grades 4-5, however, no significant differences were found between the transfer, nontransfer, and receiving-school populations. Data for the six individual events, likewise, failed to discriminate among the three populations, except in two isolated instances at grade 4: the transfer group as a whole performed better on sit-ups than receiving-school pupils, but less well than nontransfer pupils ($p<.01$); and white receiving-school girls outperformed their nontransfer counterparts on the bent arm hang ($p<.05$). (No data were available for the few white girls in the fourth-grade transfer group.)

Generally speaking, then, the younger transfer pupils -- and particularly those who are Negro -- showed somewhat greater physical fitness than did the younger nontransfer pupils. Among older pupils, however, the transfer, nontransfer, and receiving-school populations performed similarly on physical fitness measures.

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[1] Statistical comparisons were not made for white girls in grades 1 and 2, there being data for only one white female transfer pupil in each of those grades.

Table 5-7. TOTAL PHYSICAL FITNESS POINTS: GRADES 4-5

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
4: T	125.0	0.0	1	250.0	58.6	5	--	--	0	200.0	106.1	2	221.9	74.9	8
NT	232.8	90.2	16	235.0	82.9	20	177.5	96.8	10	225.0	130.7	13	222.5	98.9	59
R	271.6	95.5	73	125.0	0.0	1	209.7	107.8	95	258.3	80.4	3	236.3	106.4	172
	F= 2.202			F= 0.144			F= 0.823			F= 0.145			F= 0.436		
5: T	158.3	87.8	3	370.8	98.0	6	112.5	17.7	2	325.0	0.0	1	270.8	139.7	12
NT	285.0	85.9	5	303.1	138.5	8	216.1	94.4	14	225.0	98.3	12	245.5	107.3	39
R	264.7	96.6	85	300.0	0.0	1	230.7	109.0	97	275.0	142.9	4	247.5	104.8	187
	F= 1.927			F= 1.035			F= 1.278			F= 0.627			F= 0.284		

Note.--Rows with n = 1 not included in F computation.

2. School Attendance

School attendance data for the pre- and posttransfer years, reported as number of half days absent, appear in Table 5-8.

As would be expected, there is considerable variation in absence rate within each population, for both years. During the pretransfer year, mean absence rates were similar for the three populations within grade levels, differing at most by about five half days. Across grades, excluding kindergarten, pupils missed between one and 2-1/2 weeks of school, on the average, during that year. The data for kindergarten appear to show a lower absence rate at that grade level, but this is not the case. Kindergarten pupils attend half-day sessions only; hence, a half day missed is really an entire day's program. On the average, then, kindergarten pupils missed about 2-1/2 weeks of school during the pretransfer year.

Posttransfer absence data for the three populations reveal a much different picture. Absence rates increased in the transfer group, showed a slight decrease overall in the nontransfer group, and remained about the same for the receiving schools, again excluding kindergarten pupils. The latter, who became first-graders in the posttransfer year and hence attended full-day sessions, continued to show somewhat higher absence rates than pupils in other grades. But in this group as well, absence rates for transfer pupils ranked well above those for the nontransfer and receiving-school pupils.

Whereas no significant differences were found in pretransfer absence rates for the three populations, differences in the posttransfer rates are significant at all but one grade level. Over the posttransfer year, average absence rates for the transfer group ranged from 2-1/2 to 3-1/2 weeks. Averages for the nontransfer group, on the other hand, ranged from about one to 2-1/2 weeks; for receiving-school pupils, from a week to 2 weeks -- very close, in other words, to the corresponding pretransfer ranges.

Changes in absence rate by race, sex, and combined grades are shown for the three groups in Table 5-9.[1] Given the small

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[1] It should be borne in mind that all tables reporting pre- to posttransfer changes are based on a reduced sample; these values can be calculated only for pupils having both pre- and posttransfer data on the variable in question.

Table 5-8. HALF DAYS ABSENT: PRE- AND POSTTRANSFER YEARS

Group	Pretransfer year			Posttransfer year[a]		
	Mean	σ	n	Mean	σ	n
K: T	15.2	12.4	23	34.7	24.0	20
NT	12.6	8.2	50	26.8	18.3	58
R	13.1	8.6	240	20.5	16.4	301
		F= 0.710			F= 8.833**	
1: T	21.4	17.4	20	27.8	24.5	18
NT	26.2	20.7	53	21.8	19.1	56
R	21.0	15.4	222	18.4	14.0	263
		F= 2.110			F= 3.810*	
2: T	19.4	17.1	31	23.9	24.1	27
NT	19.3	14.5	53	14.3	14.2	58
R	16.0	12.3	257	16.3	13.9	308
		F= 2.083			F= 4.012*	
3: T	16.4	16.3	14	23.8	26.0	13
NT	12.1	11.5	51	13.7	10.2	57
R	16.7	15.5	211	17.1	17.3	263
		F= 2.022			F= 2.112	
4: T	19.1	20.7	15	25.5	23.0	14
NT	17.7	14.5	56	14.2	12.5	56
R	14.7	15.0	120	16.6	14.1	180
		F= 1.090			F= 3.447*	
5: T	16.4	16.3	20	25.1	22.9	20
NT	13.0	10.5	50	9.1	17.8	56
R	12.7	11.8	214	12.6	10.9	281
		F= 0.889			F=11.068**	

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[a] The larger *n*'s here for the nontransfer group are primarily a reflection of population growth, although retentions, double promotions, and missing data also contribute to the discrepancies. These factors apply to the receiving-school group as well, but *n*'s for the latter are also affected by the different sampling procedures employed pre- and posttransfer (see Chap. 3).

Table 5-9. CHANGE IN HALF DAY ABSENCE RATE: PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+13.0	14.4	3	+11.5	24.1	13	+ 1.5	7.8	2	+11.4	23.4	17
NT	+ 6.3*	15.7	29	+ 3.1	16.6	18	+ 8.1*	20.4	28	+ 5.4	17.6	25
R	+ 2.8*	15.4	232	- 9.2	18.9	9	+ 2.9*	17.2	214	-17.0	14.4	4
2-3: T	+ 3.7	10.0	3	+11.1	23.0	14	-19.5	13.4	2	+ 3.2	19.6	22
NT	- 1.5	15.2	25	- 4.8	11.0	19	- 0.6	12.4	29	- 2.8	13.0	27
R	+ 1.2	14.6	226	-20.2	33.6	4	- 0.8	13.3	228	+ 4.7	8.0	3
4-5: T	+16.0	27.6	5	+ 5.9	14.3	16	- 2.0	27.6	3	+ 7.4*	8.7	10
NT	- 3.1	15.7	30	- 5.0*	10.2	24	+ 1.1	23.8	28	- 7.0**	10.3	20
R	+ 0.1	14.8	162	-21.3	29.7	3	+ 0.8	12.0	161	+ 1.2	4.0	4

Note.--For all tables reporting pre- to posttransfer change, significant differences (5% *level* or better) between a group's initial and subsequent mean values are indicated by asterisks, as elsewhere in this report.

number of cases in most cells, and particularly for the transfer group, few changes within cells are statistically significant. The table does show, however, that the increased posttransfer absence for the transfer pupils is a consistent pattern across race-sex groups and across grades, with the exception of white girls (n = 7).

One can only speculate as to the reasons for this increase, but the busing of most transfer pupils during the posttransfer year has to be considered a probable factor. To miss the bus means, for most pupils, missing a day of school. Transitory illnesses, which might keep a neighborhood child out of school for half a day, are likely to mean a full day's absence for a bused child. These data suggest that school attendance should be watched carefully for children participating in busing programs. If it is correct to assume that regular school attendance is important to learning, several weeks' absence over the school year cannot be without consequence.

3. Special Problems

Supplementing health and school attendance data, information was sought concerning special problems which might limit pupil response to instruction -- such things as emotional disturbance, speech problems, learning difficulties, cultural disadvantages, etc. In an effort to determine the incidence of such problems in the three populations, teachers were asked to identify those children in their classes who required special help of one kind or another during the year. Included were special services extended within the regular school program and supportive programs of outside agencies, or with at least partial outside sponsorship.

Special School Services

Table 5-10 shows the distribution of special school services among pupils in the study. Looking at the percentages reported in the table, it is clear that special services were extended with disproportionately high frequency to pupils in the transfer group, and were least frequently provided to receiving-school pupils.

Taking the three populations as a whole, that pattern holds for all six categories of special service: service by school social workers (28% of the transfer pupils, compared to 9% of the nontransfer group and 5% of the receiving-school

Table 5-10. PUPILS RECEIVING SPECIAL SCHOOL SERVICES[a] DURING POSTTRANSFER YEAR

Group	n	SW		HT/UT		RR		SpC		PsyD		Other	
		n	%	n	%	n	%	n	%	n	%	n	%
K-1: T	40	13	32	15	38	0	0	6	15	9	22	1	2
NT	115	8	7	34	30	2	2	4	4	12	10	11	10
R	564	23	4	48	8	5	1	43	8	28	5	10	2
2-3: T	40	13	32	21	52	8	20	3	8	6	15	3	8
NT	115	13	11	21	18	16	14	15	13	14	12	0	0
R	576	37	6	54	9	44	8	43	8	36	6	10	2
4-5: T	34	6	18	9	26	10	29	5	15	1	3	1	3
NT	112	11	10	43	38	6	5	9	8	7	6	0	0
R	455	20	4	30	7	10	2	10	2	10	2	6	1
White boys	883	60	7	104	12	44	5	66	7	48	5	16	2
Negro boys	136	30	22	75	55	21	15	14	10	32	24	2	1
White girls	876	25	3	47	5	21	3	44	5	23	3	6	1
Negro girls	156	29	19	49	31	15	10	14	9	20	13	1	1

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[a] Categorized as follows: SW, school social worker; HT/UT, helping teacher or unassigned teacher; RR, remedial reading; SpC, speech correction; PsyD, psychological diagnosis; Other, school nurse, special class placement, etc.

group), service by helping teachers or unassigned teachers[1] (39%, 29%, and 8%, respectively), remedial reading (16%, 7%, and 4%), speech correction (12%, 8%, and 6%), psychological diagnosis (14%, 10%, and 5%), and other services, including special class placement, school nurse, perceptual training, etc. (4%, 3%, and 2%).

Further evidence of differential need for help in the transfer population comes from some additional data supplied by teachers. Besides identifying pupils who were being served by special programs, teachers were asked to identify children who had been referred (or needed to be) but had not received help. Altogether, 157 children were identified as having such unmet needs for service. If these needs were distributed proportionally among the three populations, percentages of the 157 children falling in the transfer, nontransfer, and receiving-school groups would be 6, 17, and 78, respectively, those being the percentages of transfer, nontransfer, and receiving-school pupils in the total population studied. In actuality, however, 14 percent were transfer pupils, 31 percent were nontransfer pupils, and 55 percent came from receiving schools. Thus, relative to population size, unmet needs for service appear to be greatest in the transfer group and least in the receiving schools.

The last four rows of Table 5-10 show the distribution of special services by race and sex. From these data, problems leading to referral are seen to be much more prevalent among Negroes than among whites, and somewhat more frequent in boys than in girls.

It can legitimately be asked whether the disproportionate concentration of at least some special problems in the transfer group might not be a consequence of the transfer. In response, it must be pointed out that Jones School had been identified for several years as a "high-need" school; as noted in an earlier chapter, a continuing effort to respond to the multiple problems of its pupils was the principal factor in the decision to close the school, as well as the impetus for an intensified program of special services the year before the transfer. It is the latter circumstance, of course -- the assignment of additional supportive services to Jones School during its final year of operation -- that ruled out consideration of services extended pre- and posttransfer as an index of response to the transfer: the competition for available services was necessarily much less for the transfer pupils during the pretransfer year than during the subsequent year. Thus, it may well be that problems of the transfer pupils were augmented by the adjustments required in a new school situation, but the history of that population precludes such an interpretation of the data presented here.

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[1] Teachers without regular classroom assignments, who serve a variety of functions in the elementary program. Although specific roles differ considerably from school to school, crisis intervention and remedial assistance are major thrusts in most cases. Such persons were assigned, one to a building, in the nontransfer school and in all but one of the receiving schools; that school elected to have a full-time remedial reading teacher instead.

Other Special Help

Four other major sources of help were available, on a somewhat selective basis, during the posttransfer year. University of Michigan students staffed a tutoring program for disadvantaged pupils, directed primarily at ghetto-area children but serving to some extent disadvantaged children from other parts of the city. After-school and Saturday enrichment programs, funded through ESEA Title I, were offered in identified target areas, which included the Jones (transfer) and Mack (nontransfer) districts and the one receiving school contiguous to those districts. The Ann Arbor Community Center, located in the ghetto area, offered a variety of enrichment activities for children living close enough to attend. Finally, special help was available through the usual community channels (social service agencies, child guidance clinics, etc.).

Table 5-11 shows the utilization of these four resources by the transfer, nontransfer, and receiving-school populations. The pattern is much the same as that for supportive school services: with the exception of Title I programs, these outside services were extended with disproportionately high frequency to transfer pupils, and they were least frequently utilized by pupils in the receiving schools.

The exception for Title I programs is a logical one. Transfer pupils who rode the bus to school could not readily participate in after-school events and were limited largely to Saturday programs. The very active after-school program housed at Mack School, on the other hand, accounts for the

Table 5-11. PUPILS RECEIVING OTHER SPECIAL HELP DURING POSTTRANSFER YEAR

Group	n	Tutoring		Title I		Commun.Center		Other[a]	
		n	%	n	%	n	σ	n	%
K-1: T	40	17	42	10	25	11	28	11	28
NT	115	5	4	71	62	4	3	0	0
R	564	1	0	35	6	1	0	8	1
2-3: T	39	24	62	7	18	13	33	10	26
NT	115	7	6	59	51	6	5	1	1
R	576	9	2	40	7	2	0	10	2
4-5: T	34	14	41	9	26	9	26	1	3
NT	112	11	10	61	54	16	14	3	3
R	455	5	1	26	6	3	1	3	1
White boys	883	5	1	93	10	1	0	15	2
Negro boys	136	34	25	62	46	31	23	13	1
White girls	876	5	1	95	11	6	1	5	1
Negro girls	155	49	32	68	44	27	17	10	6

[a] Community agency referrals.

large number of participants from the nontransfer group.

Predictably, given program foci and geographic location, a much larger percentage of Negro pupils than white pupils took part in tutoring, Title I, and Community Center programs.

It must be recognized that participation in those three programs, all directed at particular segments of Ann Arbor's pupil population, cannot be read as direct evidence of differential need, except insofar as membership in a target population constitutes such evidence. Unlike supportive school services, in other words, these programs were not equally available to all children in the study, nor were they extended on a competitive basis to those with the greatest demonstrated needs. However, the fourth category of service -- that provided through referral to community service agencies -- can perhaps be so interpreted. And the pattern there is the same: a disproportionately large number of transfer pupils were served by these agencies during the posttransfer year.

There is no way to appraise the probable effects on pupils of these special resources. The available data are limited to teachers' reports of participation and include no information about the regularity or duration of such participation. It can be said that relative to population size, more special resources were available to transfer pupils, and somewhat more to nontransfer pupils, than to those from receiving schools. The extent to which these resources were utilized, and their impact on the problems generating a need for help, cannot be inferred from these data.

4. Summary

From the data presented on pupil health, school attendance, and special problems, the transfer population emerges as a multiple-problem group -- with, however, a few notable exceptions.

The incidence of general health problems and behavioral symptoms is considerably greater in this group than in the nontransfer and receiving-school populations. Visual acuity problems are relatively more frequent in the transfer group. Hearing, on the other hand, is normal for those transfer pupils on whom audiometric data were available. Growth patterns, as reflected in height and weight, are similar for the three populations. The same is true for physical fitness in upper-grade pupils, while at the lower grade levels the transfer group is generally superior to the nontransfer group on the fitness measures employed.

School attendance patterns were similar for the three populations during the pretransfer year. Over the post-transfer year, however, the absence rate increased significantly in the transfer group, while remaining about the same among nontransfer and receiving-school pupils. Posttransfer absences for transfer pupils at the various grade levels ranged from 2-1/2 to 3-1/2 weeks, on the average, compared to 1-1/2 to 2-1/2 weeks during the pretransfer year.

The transfer group is characterized by a higher incidence of problems requiring special professional help. Service by school social workers, helping teachers, and unassigned teachers were extended with greater frequency to these pupils, and they were more often referred for remedial reading, speech correction, and psychological diagnosis. The receiving-school population shows the smallest incidence of such problems, while the nontransfer group falls somewhere between the other two. A generally similar pattern exists for service resources outside the regular school program.

Race and sex differences are evident for many of the factors examined in this chapter. Compared to white pupils, Negro pupils in the study show a higher incidence of behavioral symptoms, poorer visual acuity, and superior physical fitness; they are more often referred for special help from school personnel and from outside resources. Behavioral symptoms are more prevalent among boys than among girls, and more boys than girls are referred for special help in school. Boys likewise outperform girls on physical fitness measures, and have fewer demonstrated visual acuity problems.

Chapter 6

SCHOLASTIC APTITUDE AND ACHIEVEMENT

Academic performance was assessed via standardized tests of scholastic aptitude (IQ), reading, and arithmetic. Other indicators of performance were obtained from school promotion records.

1. Scholastic Aptitude

Lorge-Thorndike intelligence tests were administered to pupils in grades K-5 in mid-May of the pretransfer year, and again a year later. Level 1 of the test was administered in grades K-1, Level 2 in grades 2-3, and Level 3 in grades 4-5. Form A was used for the pretest, Form B for the posttest. Total IQs were obtained at all grade levels. Verbal and nonverbal IQs are provided in Level 3 of the test and were obtained for upper-grade pupils.

Total IQ

Pretransfer IQs are shown in Table 6-1. Looking at the three populations as a whole, a clear and consistent pattern of differences is apparent. Mean IQ is lowest in the transfer group and highest in the receiving schools, with the nontransfer group falling somewhere between. The largest spread occurs at the kindergarten level, where mean IQs for the transfer and receiving-school groups differ by 20 IQ points. Here, the nontransfer group falls midway between the other two groups; in grades 1-2, nontransfer mean IQs are closer to the transfer means than to the receiving-school means, while the reverse is true in grades 3-5. Differences at all grade levels are significant.

If one defines "average IQ" in the conventional fashion, as a range from 90 to 110, scores of the transfer pupils place them near the lower end of that range, except for the kindergarten group, which falls slightly below it. The nontransfer group scored near the midpoint of the range, and receiving-school pupils consistently scored above the midpoint. Fourth-grade pupils in the latter group scored near the top of the average range, while fifth-graders scored slightly above it.

When the populations are divided by race and sex, the pattern alters somewhat. Mean differences between groups are

Table 6-1. TOTAL IQ: PRETRANSFER YEAR

Group[a]	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K: T	100.3	13.6	3	79.9	11.6	13	98.3	22.3	3	89.2	10.4	13	87.3	13.8	32
NT	108.1	12.0	16	93.5	16.2	17	99.7	13.3	20	91.1	14.3	22	97.6	15.2	75
R	108.1	14.0	82	102.0	0.0	1	106.0	10.8	62	112.0	0.0	1	107.2	12.7	146
	F= 0.461			F= 6.598*			F= 2.502			F= 0.180			F=33.102**		
1: T	103.3	11.0	3	94.5	8.4	13	90.0	0.0	1	91.2	12.6	13	93.8	10.8	30
NT	108.2	13.5	24	99.6	14.4	10	107.2	13.0	16	92.4	10.7	16	102.8	14.2	66
R	107.9	12.6	114	90.9	13.8	7	106.6	12.8	102	82.8	9.0	4	106.4	13.3	227
	F= 0.201			F= 1.166			F= 0.030			F= 1.166			F=12.476**		
2: T	116.7	13.6	3	86.3	10.0	15	100.0	14.1	2	94.2	11.7	19	93.2	13.5	39
NT	106.1	14.3	17	93.3	8.7	11	112.9	10.3	17	88.1	10.0	18	100.6	15.0	63
R	104.0	12.6	61	93.0	7.6	6	106.6	13.4	67	100.0	17.0	2	104.8	13.1	136
	F= 1.429			F= 2.232			F= 1.954			F= 1.964			F=11.229**		

(table continued below)

Table 6-1 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
3: T	107.0	0.0	1	84.3	11.6	6	102.0	1.4	2	95.4	9.9	7	92.8	11.9	16
NT	103.1	10.9	14	88.8	11.8	17	104.2	10.0	17	90.4	11.2	20	96.1	12.9	68
R	104.9	10.4	83	113.0	0.0	1	104.8	12.7	85	103.0	0.0	1	104.9	11.5	170
		F= 0.372			F= 0.651			F= 0.063			F= 1.109			F=18.095**	
4: T	99.0	0.0	1	95.2	14.9	10	96.0	0.0	1	86.8	6.6	5	93.0	12.4	17
NT	103.3	17.2	19	92.4	14.6	22	111.8	12.2	15	91.9	12.8	15	99.3	16.4	71
R	110.1	14.1	41	83.2	12.5	4	112.1	12.6	55	100.8	8.4	4	109.8	14.2	104
		F= 2.595			F= 0.977			F= 0.010			F= 1.719			F=15.958**	
5: T	103.8	14.5	5	89.6	11.8	8	92.3	8.7	3	98.0	14.9	7	95.6	13.5	23
NT	98.9	15.3	15	87.5	12.5	12	114.3	14.0	19	92.0	10.3	13	100.0	16.8	59
R	111.2	11.1	56	--	--	0	112.8	13.5	58	123.0	0.0	1	112.1	12.4	115
		F= 6.362**			F= 0.145			F= 3.515*			F= 1.135			F=22.738**	

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[a] The reader is reminded that pretransfer grades are used consistently throughout this report. Thus, the group designated "K" here consists of children who began the study as kindergarten pupils and were in first grade during the posttransfer year.

generally smaller, and the consistent order (R>NT>T) observed in the total groups holds for only about a third of the race-sex cells. While means are lowest for the transfer group -- and, similarly, highest for receiving-school pupils -- in slightly more than half the cells, significant differences were found only among Negro boys in kindergarten and among fifth-grade white girls and boys. In the latter instance, the lowest mean IQ occurs in nontransfer boys; in the other two cases, means for the transfer group are lowest.

No consistent pattern of sex differences is apparent in pretransfer IQ. Among white pupils, the generally small mean differences favor boys somewhat more frequently than girls; among Negro pupils, no trend is apparent favoring either sex. Differences between whites and Negroes are generally much greater than those between sexes, and in nearly all cases the higher mean IQ is found among white pupils.

Posttransfer IQs are shown in Table 6-2. As with the pretransfer data, significant posttransfer differences occur at every grade level when the populations are considered as a whole, with the highest and the lowest mean IQs occurring, respectively, in the transfer and receiving-school groups. The gap between transfer and nontransfer means is somewhat smaller here than in the pretransfer year for grades K and 2, and about the same for grade 1. In the upper grades (particularly 3 and 4), the margin of difference between the two groups is somewhat greater in the posttransfer year. Comparing transfer and receiving-school means, there is no consistent pattern to suggest a widening gap between the two groups from grade to grade, or from the pretransfer to the posttransfer year. Posttransfer mean differences are slightly larger at grades 3 and 4, and the same at grade 1; at grades K, 2, and 5, however, the mean values are somewhat closer for the transfer and receiving-school pupils than were the corresponding pretransfer means.

A shift upward from the pretransfer values is evident in all three groups and at all grade levels. With reference to the average range defined previously, posttransfer mean IQs for the transfer group are nearer the midpoint than the lower extreme, and in grade 5 slightly above the midpoint. Nontransfer means are consistently above the midpoint, and in grades 3 and 5 approach the upper end of the range. Receiving-school means are close to the upper limit in grades K-3, and slightly above it in grades 4 and 5.

As was true for the pretransfer year, posttransfer mean IQs show no striking sex differences. Such differences as do appear tend to favor girls somewhat more often than boys, among both whites and Negroes, but the differences are generally of small magnitude. Of much greater magnitude are differences between Negro and white pupils, which show a decided advantage, overall, to the latter. As with many of the measures discussed in Chapters 4 and 5, observed differences in IQ among transfer, nontransfer, and receiving-school groups may be largely a reflection of the racial composition of those groups.

When race and sex are eliminated as possible influences on group means, the pattern of differences among the three populations becomes inconsistent, as with pretransfer IQ. Among the 24 cells or subgroups representing breakdowns by sex, race, and grade, only a third show the order of means (R>NT>T) that appeared uniformly for the total groups. Here again, the lowest mean IQs occurred more often in the transfer group than in the other two groups. Generally speaking, however, differences within cells are not of great magnitude, and only one reaches statistical significance, that favoring fifth-grade white girls in the nontransfer group over their counterparts in the other groups.

Pre- to posttransfer changes in IQ are shown in Table 6-3, for pupils having both pre- and posttransfer scores. As would be expected from the upward shift seen in the posttransfer means, changes are generally positive. Excluding those cells which represent no more than two or three pupils (and are, therefore, extremely vulnerable to chance fluctuation), pre- to posttransfer differences in the direction of a lower IQ are seen in only four cells. And the differences in those cells are so negligible as to be considered "no change," amounting to about one IQ point.

On the average, transfer pupils at the kindergarten level tended to show somewhat greater gains in IQ than those at other grade levels, and mean gains are generally greater than those for nontransfer and receiving-school kindergarten pupils. Given the small number of cases and substantial variance in individual cells, however, these

Table 6-2. TOTAL IQ: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K: T	100.0	5.7	2	98.9	13.6	7	104.5	7.8	2	94.5	10.4	11	97.3	10.9	22
NT	111.2	15.2	14	95.9	12.8	10	106.2	14.7	20	101.3	12.1	14	104.4	14.5	58
R	109.5	12.0	152	86.0	11.6	6	108.3	12.1	141	92.7	2.5	3	108.3	12.4	302
		F= 0.741			F= 1.799			F= 0.331			F= 1.527			F= 9.131**	
1: T	92.0	7.1	2	100.5	15.2	8	--	--	0	93.4	11.0	8	96.4	12.7	18
NT	109.7	15.5	21	100.1	15.2	9	113.9	13.1	14	93.5	9.8	13	105.5	15.6	57
R	111.2	11.8	126	92.8	7.5	6	110.2	13.5	127	88.4	8.5	5	109.9	13.1	264
		F= 2.474			F= 0.661			F= 0.959			F= 0.510			F= 9.920**	
2: T	122.0	6.6	3	90.2	11.6	8	90.0	0.0	1	95.4	11.6	15	96.6	14.2	27
NT	108.9	10.4	14	90.6	11.1	10	109.8	13.6	17	91.5	10.9	17	100.9	14.6	58
R	109.3	13.5	157	97.5	3.5	2	110.8	13.1	145	85.1	17.3	7	109.4	13.9	311
		F= 1.379			F= 0.371			F= 0.092			F= 1.628			F=17.316**	

(table continued below)

Table 6-2 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
3: T	--	--	0	85.2	7.5	6	103.0	0.0	1	103.3	9.2	7	95.5	12.1	14
NT	114.0	15.3	14	93.9	13.7	10	117.5	10.7	18	102.3	12.6	15	108.5	15.5	57
R	109.4	13.7	127	95.0	18.8	7	112.3	13.0	128	99.0	14.0	3	110.3	13.8	265
		F= 1.394			F= 0.924			F= 2.661			F= 0.138			F= 7.516**	
4: T	--	--	0	97.8	13.2	9	92.0	0.0	1	88.0	5.7	4	94.6	11.6	14
NT	108.2	17.2	20	100.3	13.3	16	114.1	12.1	12	96.8	8.7	8	105.6	15.1	56
R	110.1	15.1	81	90.0	1.4	2	115.9	11.1	101	97.0	8.5	2	112.9	13.5	186
		F= 0.232			F= 0.598			F= 0.296			F= 1.741			F=15.776**	
5: T	107.6	17.3	5	94.4	9.0	7	105.0	7.1	2	105.5	14.4	6	102.1	13.4	20
NT	111.6	12.6	14	96.6	13.5	9	120.4	11.2	18	98.1	9.2	15	108.4	15.0	56
R	115.1	13.4	138	96.0	11.3	3	113.8	12.0	135	96.6	10.3	5	113.9	13.0	281
		F= 1.124			F= 0.066			F= 3.147*			F= 1.256			F=10.291**	

Table 6-3. CHANGE IN TOTAL IQ: PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K: T	+ 7.5	5.0	2	+13.7	19.3	7	+10.5	21.9	2	+ 5.3	7.2	10
NT	+ 6.9	15.2	10	+ 2.5	12.2	10	+ 6.4	15.4	16	+ 7.1	13.6	13
R	+ 2.0	10.7	46	- 9.0	0.0	1	+ 2.3	10.9	28	-17.0	0.0	1
1: T	-14.0	7.1	2	+ 4.1	11.2	7	--	--	0	- 1.0	6.8	9
NT	+ 1.4	13.1	18	+ 3.4	11.2	8	+ 7.8	12.8	12	+ 1.5	10.4	12
R	+ 3.1*	12.1	68	+ 6.6	13.6	5	+ 2.3	14.7	69	+ 4.7	3.5	3
2: T	+ 5.3	8.1	3	+ 6.1	8.2	9	0.0	0.0	1	- 0.7	10.0	15
NT	+ 5.1	10.6	14	- 0.6	6.6	9	- 1.3	11.0	15	+ 5.4	10.7	14
R	+ 4.3*	10.2	38	+ 4.0	0.0	1	+ 1.6	11.5	48	+ 4.0	0.0	2
3: T	--	--	0	+ 1.6	13.7	5	0.0	0.0	1	+ 7.9*	5.7	7
NT	+12.8**	10.8	11	+ 4.3	12.2	10	+14.2**	8.7	15	+10.4**	7.6	13
R	+ 7.4**	10.1	48	+ 8.0	0.0	1	+ 9.7**	10.8	51	-14.0	0.0	1
4: T	--	--	0	+ 3.0	5.8	9	- 4.0	0.0	1	+ 1.0	8.9	4
NT	+ 5.8**	7.0	18	+ 8.1**	6.6	16	+ 1.2	4.0	12	+ 5.5	6.7	8
R	+ 8.6*	10.2	10	+ 3.0	5.7	2	+ 7.5**	6.3	11	+ 1.0	0.0	1
5: T	+ 3.8	6.5	5	+ 3.0	4.9	7	+ 9.0	1.4	2	+ 4.8*	3.6	6
NT	+12.8**	8.2	12	+ 5.1	7.1	8	+ 2.6*	4.7	17	+ 5.5**	4.8	13
R	+ 6.6**	6.8	47	--	--	0	+ 2.3*	6.9	54	-10.0	0.0	1

gains are not statistically significant.[1] In grades K-2, the only significant increases in IQ are those shown by white boys in the receiving schools. In grades 3-5, gains tend to be largest in the nontransfer group, and it is in these grades that most of the significant changes occurred. White third-, fourth-, and fifth-grade pupils in both the nontransfer and receiving-school groups gained significantly in IQ over the posttransfer year, except for nontransfer girls in grade 4. Transfer and nontransfer Negro girls in grades 3 and 5 showed a significant increase in IQ, while only one significant gain occurred among Negro boys, that among nontransfer pupils in the fourth grade.

The data presented in this section do demonstrate a small overall increase in mean IQ for pupils who have spent one year in desegregated schools. When one looks at the two comparison groups, however, it becomes clear that this phenomenon is a general one in the study population, and cannot be described as a consequence of desegregation.

Verbal and Nonverbal IQ

Verbal and nonverbal IQs were obtained for pupils in grades 4 and 5. Predictably, these component IQs are highly correlated with total IQ, discussed above, and consequently will not be treated at length here. Obtained correlations between verbal and total IQ are .93 and .94, respectively, for the pre- and posttransfer years. Corresponding correlations between nonverbal and total IQ are .92 and .94. Correlations of .73 and .77 between verbal and nonverbal IQ indicate somewhat less overlap in the two component measures.

Pretransfer verbal and nonverbal IQs appear in Table 6-4. Here, as with total IQ, the three populations differ significantly when the data are examined without regard to race or sex, and show a consistent pattern in which the lowest means occur in the transfer group and the highest in the receiving schools. As was also true for total IQ, this pattern becomes inconsistent when the populations are divided by race and sex, and few significant differences appear. Those differences here are limited to white boys: at grade 4, the

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[1] The reader is reminded here of the small number of white transfer pupils and of Negro pupils in receiving schools, virtually precluding any significant findings for those two segments of the pupil population.

Table 6-4. VERBAL AND NONVERBAL IQ: PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
4 (V): T	92.0	0.0	1	92.8	16.5	10	92.0	0.0	1	83.0	5.4	5	89.8	13.4	17
NT	99.8	18.0	19	92.5	15.0	22	109.5	12.5	15	89.5	11.9	15	97.4	16.3	71
R	110.4	15.5	41	79.0	16.8	4	112.1	13.0	55	101.8	8.5	4	109.8	15.3	104
		F= 5.464*			F= 1.365			F= 0.482			F= 3.611*			F=20.506**	
4 (NV): T	106.0	0.0	1	97.3	14.5	10	99.0	0.0	1	90.2	9.5	5	95.8	12.6	17
NT	106.4	18.8	19	91.7	17.1	22	113.5	13.9	15	93.9	16.4	15	100.7	18.7	71
R	109.3	15.1	41	87.2	9.2	4	111.6	13.6	55	99.2	8.4	4	109.3	14.7	104
		F= 0.422			F= 0.700			F= 0.240			F= 0.441			F= 8.911**	
5 (V): T	102.6	15.5	5	90.8	8.7	8	92.0	9.8	3	98.7	17.2	7	95.9	13.5	23
NT	99.7	16.8	15	87.9	9.8	12	116.7	17.3	19	92.5	11.2	13	101.2	18.4	59
R	110.4	12.9	56	--	--	0	114.2	16.3	58	129.0	0.0	1	112.5	14.8	115
		F= 3.945*			F= 0.433			F= 2.976			F= 0.980			F=16.563**	
5 (NV): T	104.8	14.0	5	87.9	16.0	8	92.0	10.6	3	96.6	12.8	7	94.7	14.6	23
NT	97.6	17.7	15	86.4	17.2	12	111.2	12.5	19	91.1	11.1	13	98.3	17.4	59
R	111.4	11.7	56	--	--	0	111.1	12.9	58	117.0	0.0	1	111.3	12.2	115
		F= 6.614**			F= 0.036			F= 3.231*			F= 1.005			F=23.590**	

mean verbal IQ for nontransfer pupils is significantly below that of receiving-school pupils;[1] at grade 5, both verbal and nonverbal IQs are lowest in the nontransfer group and highest among receiving-school pupils. Generally speaking, verbal and nonverbal IQs are comparable within groups; the largest discrepancy (and it is not a great one) occurs in the transfer group at grade 4, where the mean verbal IQ is 6 points below the nonverbal mean.

No consistent sex differences were found for the two measures, although girls in most instances have slightly higher mean IQs -- both verbal and nonverbal -- than do their male counterparts. Racial differences are generally larger, as with total IQ, and in nearly all cases favor the white child.

Posttransfer verbal and nonverbal IQs, presented in Table 6-5, show essentially the same patterns described for the pretransfer data. As with total IQ, a general upward shift is evident in both verbal and nonverbal posttransfer means, relative to pretransfer values. This shift, though not large in most cases, is consistently apparent except among fourth-grade transfer pupils. For that group, mean verbal IQ diminished insignificantly, by about one IQ point, over the posttransfer year -- largely a consequence of lower posttransfer scores among the five girls in that group. The largest upward shifts are found in nonverbal IQ at grade 5, for the transfer and nontransfer groups -- 8 and 10 IQ points, respectively, compared to 3 in the counterpart receiving-school group.

As with the pretransfer data, posttransfer verbal and nonverbal IQs are generally similar within groups. Again, the only notable exceptions occur at grade 4 -- in the transfer group, as before, and to a lesser extent in the nontransfer group. The posttransfer verbal IQ for the latter group is 5 points below the nonverbal mean; in the transfer group, the 6-point discrepancy seen in the pretransfer data increased to 10 points over the posttransfer year.

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[1] As noted in an earlier chapter, a cell represented in the table by a single individual ($\underline{n} = 1$) does not figure in the calculation of F. Here, $\underline{n} = 1$ for the transfer group; the significant difference, therefore, is between the nontransfer and receiving-school groups.

Table 6-5. VERBAL AND NONVERBAL IQ: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
4 (V): T	--	--	0	92.8	12.7	9	87.0	0.0	1	79.2	4.6	4	88.5	12.0	14
NT	103.9	17.7	20	99.4	14.1	16	111.6	12.5	12	93.6	7.5	8	102.8	15.3	56
R	108.9	17.9	81	93.0	2.8	2	115.1	13.3	101	99.5	2.1	2	112.0	15.8	186
	F= 1.262			F= 0.805			F= 0.789			F= 8.785**			F=20.272**		
4 (NV): T	--	--	0	102.2	16.5	9	96.0	0.0	1	95.8	9.0	4	99.9	14.0	14
NT	112.0	19.4	20	100.6	14.1	16	116.2	13.2	12	99.4	13.2	8	107.9	17.0	56
R	110.9	15.2	81	82.0	6.9	3	116.3	11.8	101	94.0	15.6	2	113.2	14.2	187
	F= 0.089			F= 2.387			F= 0.000			F= 0.210			F= 7.041**		
5 (V): T	106.4	18.6	5	92.7	7.6	7	104.5	13.4	2	104.7	18.9	6	100.9	15.3	20
NT	111.1	16.1	14	93.9	12.3	9	121.7	12.4	18	97.0	9.8	15	108.0	16.9	56
R	114.0	15.5	138	92.7	11.0	3	113.5	13.8	135	97.0	11.4	5	113.3	14.8	281
	F= 0.758			F= 0.029			F= 3.396*			F= 0.856			F= 8.192**		
5 (NV): T	108.4	16.3	5	95.3	12.4	7	105.5	0.7	2	106.0	10.2	6	102.8	12.9	20
NT	111.4	11.2	14	98.4	15.5	9	118.7	10.6	18	98.8	10.2	15	108.3	14.3	56
R	115.6	13.5	138	98.7	12.1	3	113.4	12.4	135	95.6	10.1	5	114.0	13.2	281
	F= 1.268			F= 0.116			F= 1.957			F= 1.605			F= 9.905**		

2. Reading

Pupils in grades 1-5 were administered Gates reading tests in late May of the pretransfer year, and at the same time the following year. Kindergarten pupils were pretested on the Lee-Clark reading readiness test and took the Gates test the following year. The Gates Primary test was used in grades 1-2 and the Advanced Primary in grade 3. Both provide scores for word recognition and paragraph meaning. Gates Basic reading tests were administered in grades 4-5, yielding scores for reading vocabulary and reading to appreciate general significance. Form 3 of the Gates instruments was used for pretesting, Form 1 for the posttest.

Gates test results were analyzed as age-equivalent scores for the vocabulary and comprehension measures, and for average reading performance, defined as the mean of the age-equivalent scores for vocabulary and comprehension. The Lee-Clark test yields a total score only, and is considered here along with average reading performance. In the absence of age-equivalent scores for the Lee-Clark, approximations were obtained by matching grade-placement scores for that test with those for the Gates, and assigning the corresponding Gates age-equivalent score. Thus, a child with a grade-level score of 1.5 on the Lee-Clark would be assigned the age-equivalent score corresponding to a grade-placement score of 1.5 on the Gates.

Average Reading Performance

Average reading performance for the pretransfer year is shown in Table 6-6. For the three populations as a whole, a familiar pattern is evident. As was found for scholastic aptitude measures, significant differences at every grade level favor receiving-school pupils over the nontransfer and transfer groups, and show the latter to have the lowest mean scores. Another pattern evident here is one documented by Coleman *et al.* (1966) as a national phenomenon: a gap in achievement between the predominantly Negro transfer group and the predominantly white receiving-school group which increases progressively through the grades. At the kindergarten level, mean reading age for the two groups differs by about 3 months; at grade 5, the difference is nearly 18 months. There is some suggestion of a similar pattern in the nontransfer group, although it does not begin to be apparent in that group until the middle

Table 6-6. AVERAGE READING PERFORMANCE: PRETRANSFER YEAR
(Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K: T	80.7	6.5	3	77.7	5.5	12	79.7	7.6	3	79.7	4.2	13	79.0	5.1	31
NT	82.4	6.2	16	76.5	6.3	17	83.3	4.9	19	78.2	7.1	22	80.0	6.7	74
R	81.2	7.0	139	69.0	4.2	2	82.9	6.5	109	76.4	6.6	5	81.8	6.9	255
	F= 0.205			F= 1.809			F= 0.427			F= 0.540			F= 3.645*		
1: T	92.7	5.1	3	89.6	5.4	12	82.0	0.0	1	89.7	5.2	13	89.7	5.3	29
NT	93.0	7.0	25	88.0	2.3	10	98.1	7.4	16	89.1	5.2	17	92.5	7.1	68
R	92.1	7.3	108	--	--	0	95.3	7.0	95	93.0	0.0	2	93.6	7.3	205
	F= 0.182			F= 0.734			F= 2.251			F= 0.513			F= 3.936*		
2: T	100.7	8.5	3	94.8	7.7	16	93.5	5.0	2	96.7	6.6	18	96.1	7.1	39
NT	101.9	4.4	17	96.7	4.5	11	105.9	4.1	17	99.6	5.0	18	101.4	5.5	63
R	101.0	6.6	62	91.8	5.4	5	103.5	5.5	67	101.0	8.5	2	101.9	6.4	136
	F= 0.138			F= 1.015			F= 5.310**			F= 1.234			F=13.305**		

(table continued below)

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Table 6-6 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
3: T	124.0	0.0	1	98.8	2.7	6	117.0	4.2	2	116.0	6.9	7	110.2	10.4	16
NT	117.1	11.3	14	101.5	12.3	17	118.6	6.7	17	112.3	10.1	20	112.2	12.0	68
R	116.7	9.2	84	102.0	10.2	4	118.8	8.0	101	111.0	9.9	2	117.4	9.0	191
	F= 0.033			F= 0.159			F= 0.049			F= 0.451			F= 9.685**		
4: T	106.0	0.0	1	117.6	13.4	10	109.0	0.0	1	110.2	6.0	4	114.5	11.5	16
NT	131.9	18.6	18	120.2	18.0	22	136.1	13.1	15	121.8	10.8	15	127.0	16.9	70
R	128.6	20.0	47	--	--	0	135.5	16.6	47	--	--	0	132.1	18.6	94
	F= 0.366			F= 0.169			F= 0.016			F= 4.103			F= 7.362**		
5: T	146.4	23.4	5	119.1	13.5	8	129.0	4.4	3	150.4	28.6	7	135.9	24.2	23
NT	137.3	17.4	15	124.7	16.2	12	161.2	25.3	19	129.1	12.0	13	140.6	24.0	59
R	154.1	25.0	56	147.0	0.0	1	154.3	21.9	48	142.5	16.4	4	153.7	23.3	109
	F= 3.057			F= 0.638			F= 2.732			F= 3.088			F= 9.045**		

grades. In grades K-2, mean reading ages for the nontransfer group average about a month below the corresponding means for receiving-school pupils; in grades 3 and 4, the difference is about 5 months, and in grade 5 it reaches 13 months. Thus, by fifth grade, nontransfer pupils are about a year behind their receiving-school counterparts in reading achievement, compared to the one-and-a-half-year deficit seen in the transfer group.

When race and sex are taken into account, significant differences all but vanish, the order R>NT>T is preserved in only a few cells, and the highest cell means are more often those of the nontransfer group than of the receiving-school group. In more than half the cells, however, the transfer group continues to show a mean reading age at least somewhat below the means for the other two groups.

Both race and sex differences are clearly apparent in the pretransfer reading scores. Within grades, populations, and racial groups, means for girls are generally higher than those for boys. A noteworthy exception is found among the small group of white transfer pupils, where at all but one grade level (grade 4, represented by only one boy and one girl), mean reading age is higher for boys, and in some instances substantially so. Differences between Negro and white pupils increase from lower to upper grades, and in nearly all cases favor the white child. Thus, pretransfer reading performance is generally best among white girls, poorest among Negro boys.

Average reading performance for the posttransfer year is shown in Table 6-7. The pattern is much the same as that for the pretransfer year. Significant differences in reading age are seen among the total populations at all but one grade level (grade 3), and at all grade levels the order of means is that observed previously: R>NT>T. The widening gap between transfer and receiving-school pupils is again evident, although the smallest difference in reading age occurs here in grade 1 (4-1/2 months) rather than kindergarten (7-1/2 months). Beyond grade 1, however, the differences increase sharply, approaching 20 months by grade 5. The average reading performance of nontransfer pupils is much less discrepant from that of receiving-school pupils, although there continues to be some suggestion of the trend noted in the pretransfer year. It is not entirely consistent, however, and the largest posttransfer mean differences, at grades 4 and 5, are only about 8 months.

Within homogeneous race-sex subgroups, receiving-school means are highest, and means for the transfer group lowest, in more than half the cells. Significant differences appear among white kindergarten boys and among white girls in grades 4 and 5 -- all three cells representing, however, only one or two transfer pupils. No significant differences were found among Negro pupils.

Race and sex differences in posttransfer reading scores are generally similar to those appearing in the pretransfer data. Within grades and populations, means for white girls are higher than means for white boys in almost every case. The same discrepancy is apparent between Negro girls and boys, although in several instances the latter had somewhat higher means. Racial differences consistently favor the white child, with a few exceptions in the transfer group involving cells with only one or two white children.

Pre- to posttransfer changes in average reading performance are shown in Table 6-8, for those pupils having data for both occasions. As would be expected, the changes are generally positive, and except where the number of cases is very small, most are significant.

The notion of statistical significance relative to changes in age-linked characteristics, such as achievement, deserves comment here. To state a significance level for a finding is simply to state the probability of that finding having occurred by chance. A pre- to posttransfer difference significant at the 5 percent level is a difference whose probability of chance occurrence is 5:100 if, in fact, the true difference is zero. For many behavioral phenomena, some degree of constancy over time is the normal expectation, and evidence of significant change may be taken as evidence that something has had unusual impact on that behavior. For achievement test results, on the other hand, the expectancy is that change will occur from year to year. Where age-equivalent scores are used, it is expected that most children will gain about 12 months per year[1] in reading age, or whatever the content area happens to be. In this situation, rejecting the concept of "no change," on the

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[1] Assuming, of course, that those tested are comparable to the population upon which the test was standardized.

Table 6-7. AVERAGE READING PERFORMANCE, POSTTRANSFER YEAR
(Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K: T	81.0	1.4	2	87.3	5.9	7	92.0	1.4	2	86.1	4.4	11	86.5	5.0	22
NT	92.7	7.8	14	86.0	5.4	10	97.3	8.2	19	89.2	5.5	14	92.2	7.8	57
R	93.1	6.4	151	85.2	4.1	5	95.5	7.3	141	91.3	4.2	3	94.1	6.9	300
	F= 3.566*			F= 0.240			F= 0.733			F= 1.888			F=12.830**		
1: T	97.0	2.8	2	94.8	6.7	8	--	--	0	101.1	7.0	8	97.8	7.0	13
NT	101.3	7.6	21	94.4	5.4	9	104.2	6.3	14	97.6	6.2	13	100.1	7.3	57
R	102.7	5.6	125	96.8	3.6	6	104.7	5.2	126	92.6	5.2	5	103.3	5.7	262
	F= 1.344			F= 0.368			F= 0.071			F= 2.813			F=12.079**		
2: T	115.3	16.3	3	102.8	6.5	8	103.0	0.0	1	105.1	9.9	15	105.4	9.9	27
NT	113.7	11.8	14	103.9	9.7	10	120.2	7.2	17	107.6	8.6	17	112.1	11.0	58
R	116.9	9.6	157	94.0	1.4	2	120.6	7.5	143	102.4	11.9	7	118.1	9.4	309
	F= 0.693			F= 1.218			F= 0.000			F= 0.749			F=27.940**		

(table continued below)

Table 6-7 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
3: T	--	--	0	100.6	10.3	5	118.0	0.0	1	130.7	11.7	7	118.2	18.0	13
NT	139.2	30.8	14	105.2	14.1	10	140.3	19.9	18	127.7	12.9	15	130.6	24.1	57
R	129.8	19.9	127	116.3	21.4	7	133.7	18.0	127	115.0	15.7	3	131.1	19.2	264
	F= 2.481			F= 1.593			F= 2.097			F= 1.623			F= 2.587		
4: T	--	--	0	126.3	20.4	9	123.0	0.0	1	121.0	5.1	4	124.6	16.4	14
NT	136.6	27.5	20	128.6	23.2	16	143.7	16.0	12	125.5	20.5	8	134.2	23.5	56
R	147.8	27.3	80	125.0	4.2	2	157.1	21.5	99	139.5	14.8	2	152.5	24.6	183
	F= 2.642			F= 0.045			F= 4.359*			F= 0.793			F=18.734**		
5: T	144.0	19.2	5	127.3	12.8	7	149.0	17.0	2	153.2	25.1	6	141.4	20.9	20
NT	148.9	26.9	14	129.7	15.2	9	179.7	15.0	18	138.9	13.7	15	153.0	26.5	56
R	160.6	22.9	137	141.3	23.2	3	162.3	22.3	134	135.8	25.8	5	160.8	22.9	279
	F= 2.718			F= 0.884			F= 5.658**			F= 1.468			F= 8.182**		

Table 6-8. CHANGE IN AVERAGE READING PERFORMANCE: PRE- TO POSTTRANSFER YEAR (Age-Equivalent Scores)

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K:[a]	T	+ 3.5	3.5	2	+ 8.3**	5.0	7	+14.0	8.5	2	+ 6.2**	4.4	10
	NT	+10.4**	4.2	10	+ 8.9**	5.0	10	+11.9**	6.0	15	+10.9**	5.2	13
	R	+13.6**	7.8	60	+17.0	2.8	2	+14.1**	7.6	38	+22.0	0.0	1
1:	T	+ 6.5	2.1	2	+ 4.9**	2.0	7	--	--	0	+ 9.6**	5.9	9
	NT	+ 8.4**	5.2	19	+ 6.5**	3.8	8	+ 6.3**	4.7	12	+ 6.9**	6.1	13
	R	+ 8.8**	4.6	43	--	--	0	+ 8.1**	5.6	44	--	--	0
2:	T	+14.7	8.4	3	+ 4.4*	4.4	10	+13.0	0.0	1	+ 8.0**	5.5	15
	NT	+12.2**	10.7	14	+ 7.8*	8.1	9	+15.9**	5.9	15	+ 8.6**	6.4	14
	R	+14.6**	5.9	45	+ 5.0	0.0	1	+16.2**	5.1	47	+13.0	5.7	2
3:	T	--	--	0	+ 6.2	9.0	4	- 2.0	0.0	1	+14.7**	7.5	7
	NT	+29.3**	15.6	11	+ 2.3	6.7	10	+21.1**	12.2	15	+14.5**	9.5	13
	R	+14.0**	13.9	63	+12.7	13.6	3	+15.4**	11.7	77	0.0	0.0	1
4:	T	--	--	0	+ 8.0	13.2	9	+14.0	0.0	1	+10.8*	5.9	4
	NT	+ 7.5*	10.4	17	+ 8.4**	8.9	16	+10.1**	8.3	12	+ 5.2	14.7	8
	R	+ 7.5**	6.1	11	--	--	0	+19.4**	12.5	9	--	--	0
5:	T	- 2.4	14.2	5	+ 6.7	18.0	7	+18.5	12.0	2	- 0.7	12.1	6
	NT	+ 7.6*	9.0	12	+ 2.4	6.0	8	+13.6**	14.5	17	+ 6.8	11.2	13
	R	+ 4.5	14.2	35	+19.0	0.0	1	+ 8.7**	12.2	32	- 6.5	10.6	2

[a] Differences here are based on pretransfer Lee-Clark scores and posttransfer Gates scores (see text, p. 109).

basis of statistical probability, need not indicate a desirable change. Examples of this can be seen in the table, where several statistically significant gains represent a lesser degree of progress in reading than would be expected on the basis of test norms. The reverse is, of course, likewise true: gains greater than one would predict, on the basis of expected year-to-year progress, may fall short of an acceptable significance level, where group n's are small and/or variability substantial.

On the basis of Table 6-8, two general statements can be made about posttransfer reading changes in the transfer group, a majority of which are significant for Negro pupils and none for whites. First, these changes are generally smaller than those observed for receiving-school pupils, and in many cases smaller than those found in the corresponding nontransfer groups. There are cases, however, where the reading gains of transfer pupils equal or exceed those made by their counterparts in the other two groups. Most of these involve cells with very small numbers of transfer pupils; they include white boys in grade 2, white girls in grades K and 5, and Negro girls in grades 1, 3, and 4. In no case is greater progress evident among Negro boys in the transfer group.

A second general statement which can be made is that compared to receiving-school pupils, at least, gains made by transfer pupils less often approach an "average" year's progress. Of the 21 table cells which have entries from the transfer group, only 7 show mean gains in reading age of 10 or more months.[1] Receiving-school pupils show mean gains of that magnitude in 12 of the 19 cells in which they are represented. Nontransfer pupils, represented in all 24 cells of the table, show mean gains of 10 months or more in only 10 cells. By this kind of yardstick, then, overall progress in the nontransfer group was not greatly different from that of the transfer group.

The pattern of race and sex differences seen in the pre- and posttransfer means is reflected here in the change scores. Of the 17 mean changes reported for groups comprised of white girls, 13 indicate an average gain in reading of at least 10 months. White boys and Negro girls are about on a par with one another, with 7 of 16 and 6 of 15 mean gains, respectively, indicative of normal progress. Among Negro boys, only 3 of 16 mean changes reported are as great as 10 months, all three occurring among receiving-school pupils.

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[1] Recognizing the imprecision of test scores, a range of 12 months ± 2 is taken here as indicating "normal" progress, relative to the test norms.

The hazards implicit in judging an individual's academic progress from two brief samples of behavior (i.e., a pretest and a posttest) are obvious and need not be elaborated here. By that imperfect criterion, however, it is clear that over the posttransfer year, some transfer pupils showed substantial gains in reading -- beyond the test-based expectancy for the typical elementary school child, and certainly well beyond a realistic expectancy for the ghetto child. It is equally clear that some transfer children demonstrated little or no gain, and that for the group as a whole, the relative deficit in average reading performance evident prior to the transfer was just as evident at the end of the first posttransfer year.[1]

The term relative in the above paragraph must be kept in mind. The described deficit in reading for the transfer pupils is seen to be neither large nor general when the obtained means are translated into grade-placement equivalents (Table 6-9). The table shows expected grade-placement scores, based on administration of reading tests in the ninth month of a 10-month school year. Comparison of these values with grade-placement equivalents of the obtained means shows that during the pretransfer year, all but the fourth-grade transfer pupils performed about at the level expected, or somewhat above. In the posttransfer year, the two youngest groups continued to perform at the expected grade level; those in grades 2-5 were somewhat below. The largest deficit in terms of expected grade level, however, is only 6 months -- much less than the relative deficit apparent when the transfer pupils are compared with the pupils in the other two groups.

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[1] See Appendix C for data relating to subsequent performance.

Table 6-9. AVERAGE READING PERFORMANCE:
GRADE-PLACEMENT EQUIVALENTS OF AGE-LEVEL MEANS

Group		Pretransfer		Posttransfer	
		Expected	Obtained	Expected	Obtained
K:	T	0.9	1.3	1.9	2.0
	NT		1.4		2.5
	R		1.6		2.6
1:	T	1.9	2.3	2.9	3.0
	NT		2.5		3.2
	R		2.6		3.4
2:	T	2.9	2.8	3.9	3.6
	NT		3.2		4.2
	R		3.3		4.7
3:	T	3.9	4.0	4.9	4.7
	NT		4.2		5.9
	R		4.6		5.9
4:	T	4.9	4.4	5.9	5.3
	NT		5.5		6.1
	R		6.0		7.4
5:	T	5.9	6.2	6.9	6.5
	NT		6.5		7.5
	R		7.5		8.1

Reading Vocabulary and Comprehension

Vocabulary and comprehension scores are necessarily highly correlated with average reading performance, the latter being the mean of the age-equivalent scores obtained for vocabulary and comprehension. For the pretransfer year, average reading performance correlated .96 with vocabulary and .97 with comprehension scores; corresponding coefficients for the posttransfer year were .97 and .96. Vocabulary and comprehension scores were likewise highly correlated, as evidenced by coefficients of .87 and .88.

Given the built-in overlap between average reading scores and scores for vocabulary and comprehension, and the high correlations between vocabulary and comprehension scores, findings for the latter two measures are essentially the same as those reported for average reading performance and need not be separately discussed. For readers with a special interest in reading performance, however, those findings are included. Tables 6-10 and 6-11 present pre- and posttransfer data on reading vocabulary; corresponding data for reading comprehension appear in Tables 6-12 and 6-13.

3. Arithmetic

Data on arithmetic skills, as measured by the California achievement tests, were obtained from school records. At the time of the study, these tests were routinely administered on an annual basis, with the measurement of arithmetic skills beginning in grade 3.

These data are unsatisfactory from two standpoints. First, in the judgment of local staff, the California test is not an adequate yardstick for Ann Arbor's elementary mathematics program. Its use at the time of the study was largely a continuation of tradition, in the absence of an appropriate test for a modern mathematics curriculum. Secondly, routine achievement tests were at that time administered in midyear, but were utilized here in spite of that fact because there seemed little to be gained by subsequent readministration of a test poorly suited to the curriculum. This meant that pretransfer data were gathered well before the end of the pretransfer year, and constituted an uncertain baseline; posttransfer measures, by the same token, were gathered midway through the posttransfer year. These two considerations greatly limit the value of the data reported here, and must be borne in mind as these data are examined.

The California test yields age-equivalent scores for arithmetic fundamentals and arithmetic reasoning, as well as a total score. As with the reading measures, the two component arithmetic scores are highly correlated with one another (.82 and .86 in the pre- and posttransfer years, respectively) and with the total score. For the pretransfer year, scores on both fundamentals and reasoning correlated .95 with total score; for the posttransfer year the corresponding coefficients were .97 and .94. In view of the demonstrated lack of uniqueness in the component measures, and particularly in view of the limitations discussed above for the arithmetic measures generally, only pre- and posttransfer data for total scores are considered in this report.

Total Arithmetic Performance

Arithmetic data for the pretransfer year are shown in Table 6-14. These data fail to show a consistent pattern of differences among the three populations as a whole. At grade 3, the mean for the transfer group is lower than the means for nontransfer and receiving-school pupils, but not significantly so. Significant differences appear at grades 4 and 5, both giving the advantage to receiving-school pupils. At grade 4, however, the transfer group outperformed the nontransfer group; at grade 5, the means for those two groups are almost identical. A tendency is apparent for receiving-school means to become increasingly different from those of the other two groups, from grade 3 to grade 5. Relationships between transfer and nontransfer means, on the other hand, are inconsistent from grade to grade, and show no evidence of progressive difference between these two groups over the three-grade span.

When the populations are divided by race and sex, significant differences are found among white boys at all three grade levels, but nowhere else. At grade 3, the difference favors nontransfer white boys over white boys in the receiving schools; at grade 4, the reverse is true, and at grade 5, white receiving-school boys significantly outperformed their counterparts in the other two groups. A general trend apparent in grades 4 and 5 shows nontransfer pupils to have the lowest means, except among white girls. Among fourth-grade Negro pupils, means for the transfer group are highest; for white fourth-graders and all fifth-grade pupils, the highest means occur in the receiving-school group. At grade 3, transfer pupils generally have somewhat lower means than the other two groups, although among Negro girls, means for the three groups are very similar.

Race and sex differences are less consistent than those apparent for reading performance. White boys show something of an advantage over white girls, although some exceptions are noted. A general tendency in this direction is seen among Negro boys in grades 4 and 5, but at grade 3 mean differences uniformly favor Negro girls. Between racial groups, mean differences generally favor white pupils, the few exceptions occurring in comparisons involving only one or two white or Negro pupils.

Table 6-10. READING VOCABULARY: PRETRANSFER YEAR (Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1: T	93.3	5.5	3	91.4	6.9	12	81.0	0.0	1	90.9	6.8	13	91.0	6.7	29
NT	94.1	6.3	25	37.8	4.0	10	98.6	7.6	16	89.2	5.4	17	93.0	7.2	68
R	92.5	7.1	108	--	--	0	95.7	7.3	95	96.5	0.7	2	94.0	7.3	205
	F= 0.576			F= 2.159			F= 2.236			F= 1.424			F= 2.326		
2: T	102.3	5.5	3	95.9	7.6	16	94.0	4.2	2	98.9	7.5	18	97.7	7.4	39
NT	100.6	5.1	17	95.6	5.3	11	104.8	2.2	17	99.4	5.9	18	100.5	5.6	63
R	101.1	5.6	62	93.8	6.5	5	102.8	4.6	67	101.0	7.1	2	101.6	5.4	136
	F= 0.123			F= 0.195			F= 6.171**			F= 0.093			F= 6.905**		
3: T	126.0	0.0	1	98.8	5.5	6	116.5	7.8	2	117.9	6.6	7	111.1	11.5	16
NT	117.4	10.7	14	102.2	12.2	17	117.5	6.8	17	111.8	11.1	20	112.0	11.9	68
R	115.8	8.8	84	105.0	11.6	4	118.4	8.0	101	113.0	11.3	2	116.9	8.7	191
	F= 0.376			F= 0.391			F= 0.153			F= 0.918			F= 8.178**		

(table continued below)

Table 6-10 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
4: T	102.0	0.0	1	115.5	22.5	10	108.0	0.0	1	102.8	10.6	4	111.0	19.1	16
NT	136.3	23.9	19	120.1	23.6	22	142.3	12.9	15	124.7	18.2	15	130.1	22.2	71
R	133.9	24.3	47	--	--	0	137.4	17.8	47	--	--	0	135.7	21.2	94
	F= 0.134			F= 0.272			F= 0.937			F= 5.212*			F= 9.224**		
5: T	131.2	13.4	5	110.5	9.5	8	122.3	19.5	3	138.7	35.1	7	125.1	24.0	23
NT	140.0	20.4	15	117.8	18.7	12	157.9	22.9	19	123.8	11.2	13	137.7	24.8	59
R	151.9	26.0	57	144.0	0.0	1	151.7	21.9	48	134.5	30.2	4	151.1	24.3	110
	F= 2.673			F= 1.016			F= 3.382*			F= 1.010			F=13.424**		

Table 6-11. READING VOCABULARY: POSTTRANSFER YEAR
(Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1: T	98.5	3.5	2	96.4	7.3	8	--	--	0	100.8	5.1	8	98.6	6.2	18
NT	100.4	6.5	21	94.8	4.4	9	103.6	4.2	14	98.3	6.0	13	99.8	6.2	57
R	102.6	4.5	125	99.7	5.1	6	103.3	4.0	126	93.8	6.9	5	102.7	4.5	262
		F= 2.552			F= 1.316			F= 0.061			F= 2.133			F=12.727**	
2: T	114.7	15.5	3	103.5	8.0	8	104.0	0.0	1	105.3	9.8	15	105.7	9.9	27
NT	115.7	11.0	14	105.5	8.3	10	121.3	6.2	17	108.6	9.1	17	113.5	10.5	58
R	116.8	8.4	157	94.0	0.0	2	120.0	6.5	143	102.7	12.4	7	117.8	8.4	309
		F= 0.182			F= 1.751			F= 0.650			F= 0.999			F=26.851**	
3: T	--	--	0	97.2	8.6	5	122.0	0.0	1	135.6	18.9	7	119.8	23.7	13
NT	146.1	39.4	14	103.3	17.6	10	144.8	22.2	18	130.4	14.6	15	134.1	29.3	57
R	134.7	24.6	127	121.1	33.7	7	138.1	22.9	127	117.0	24.5	3	135.8	24.2	264
		F= 2.397			F= 1.930			F= 1.357			F= 1.266			F= 2.548	

(table continued below)

Table 6-11 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
4: T	--	--	0	123.0	25.8	9	122.0	0.0	1	109.5	10.2	4	119.1	21.8	14
NT	141.3	32.6	20	128.1	26.6	16	146.7	15.3	12	126.1	24.4	8	136.5	27.4	56
R	149.8	28.5	80	116.5	2.1	2	160.2	22.9	99	138.0	9.9	2	154.9	26.1	183
	F= 1.352			F= 0.247			F= 3.949*			F= 1.515			F=20.191**		
5: T	141.6	30.5	5	125.6	13.8	7	158.0	48.1	2	153.7	34.3	6	141.2	29.3	20
NT	155.3	29.5	14	131.8	24.1	9	187.1	14.2	18	143.9	20.0	15	158.7	30.0	56
R	167.7	24.8	137	142.7	25.8	3	167.9	22.5	134	130.2	22.3	5	166.9	24.2	279
	F= 3.860*			F= 0.694			F= 6.330**			F= 1.288			F=10.954**		

Table 6-12. READING COMPREHENSION: PRETRANSFER YEAR
(Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1: T	91.7	4.5	3	87.3	4.6	12	82.0	0.0	1	88.0	4.3	13	87.9	4.5	29
NT	91.5	8.1	25	87.6	3.2	10	96.9	8.1	16	88.4	6.8	17	91.4	7.9	68
R	91.2	8.2	108	--	--	0	94.2	7.7	95	89.5	0.7	2	92.6	8.1	205
	F= 0.023			F= 0.023			F= 1.613			F= 0.064			F= 4.733**		
2: T	98.3	12.1	3	93.0	8.7	16	93.0	5.7	2	93.8	6.4	18	93.8	7.7	39
NT	102.6	7.0	17	97.4	5.4	11	106.5	6.9	17	99.3	5.9	18	101.8	7.1	63
R	100.5	8.5	62	89.0	4.7	5	103.6	7.6	67	101.0	9.9	2	101.6	8.4	136
	F= 0.601			F= 2.523			F= 3.215*			F= 3.819*			F=15.959**		
3: T	122.0	0.0	1	98.3	3.3	6	117.0	0.0	2	113.7	8.9	7	108.9	10.6	16
NT	116.6	12.7	14	100.4	13.1	17	119.2	8.0	17	112.2	11.8	20	111.9	13.4	68
R	117.1	10.8	84	98.0	9.5	4	118.8	9.3	101	108.5	7.8	2	117.5	10.4	191
	F= 0.016			F= 0.121			F= 0.049			F= 0.176			F= 9.362**		

(table continued below)

Table 6-12 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
4: T	110.0	0.0	1	119.1	8.9	10	110.0	0.0	1	117.0	7.4	4	117.4	8.3	16
NT	124.4	17.7	18	119.9	17.1	22	129.5	16.6	15	118.3	9.2	15	122.8	16.0	70
R	122.7	18.5	47	--	--	0	133.1	18.8	47	--	--	0	127.9	19.3	94
	F= 0.105			F= 0.019			F= 0.435			F= 0.064			F= 3.440*		
5: T	160.6	38.0	5	127.4	21.0	8	135.0	13.1	3	161.6	25.8	7	146.0	29.5	23
NT	134.1	18.0	15	131.1	17.6	12	164.1	30.2	19	134.2	17.9	13	143.2	26.4	59
R	154.8	28.9	56	150.0	0.0	1	156.4	26.3	48	150.0	7.1	4	155.3	27.0	109
	F= 3.597*			F= 0.183			F= 1.634			F= 4.641*			F= 4.148*		

Table 6-13. READING COMPREHENSION: POSTTRANSFER YEAR
(Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1: T	95.0	1.4	2	92.4	7.5	8	--	--	0	100.9	9.5	8	96.4	8.8	18
NT	101.7	9.7	21	93.9	7.4	9	104.2	9.0	14	96.5	7.5	13	99.9	9.3	57
R	102.3	7.9	125	93.3	2.7	6	105.4	7.4	125	91.0	4.6	5	103.4	8.0	261
	F= 0.829			F= 0.113			F= 0.332			F= 2.481			F= 9.122**		
2: T	115.7	17.6	3	101.2	6.2	8	102.0	0.0	1	104.3	10.8	15	104.6	10.7	27
NT	111.2	13.2	14	101.9	11.6	10	118.7	9.8	17	106.1	9.0	17	110.3	12.2	58
R	116.4	11.8	157	94.0	2.8	2	120.6	9.5	143	101.6	12.4	7	117.9	11.4	309
	F= 1.213			F= 0.611			F= 0.624			F= 0.473			F=24.741**		
3: T	--	--	0	103.2	13.0	5	114.0	0.0	1	125.6	12.5	7	116.1	16.0	13
NT	132.0	25.3	14	106.7	13.1	10	135.3	20.7	18	124.7	16.4	15	126.7	21.8	57
R	124.5	18.3	127	110.9	11.1	7	128.7	16.3	126	112.3	8.1	3	126.0	17.5	263
	F= 1.966			F= 0.565			F= 2.420			F= 0.962			F= 1.929		

(table continued below)

Table 6-13 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
4: T	--	--	0	129.1	18.2	9	123.0	0.0	1	132.0	11.2	4	129.5	15.4	14
NT	131.4	24.8	20	128.4	22.0	16	140.2	18.1	12	124.4	19.4	8	131.4	22.0	56
R	145.2	28.9	80	133.0	5.7	2	153.5	25.2	99	140.0	19.8	2	149.5	27.0	183
	F= 3.820			F= 0.045			F= 3.101			F= 0.727			F=13.266**		
5: T	146.0	16.5	5	128.9	20.4	7	139.5	14.8	2	152.2	19.0	6	141.2	19.9	20
NT	142.0	28.5	14	127.0	9.2	9	171.3	23.5	18	133.7	15.0	15	146.8	27.3	56
R	153.0	25.9	137	139.7	23.7	3	156.2	26.1	134	140.8	33.0	5	154.1	26.1	279
	F= 1.264			F= 0.686			F= 3.255*			F= 1.824			F= 3.784*		

Table 6-14. ARITHMETIC PERFORMANCE: PRETRANSFER YEAR
(Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
3: T	118.0	0.0	1	105.7	4.9	6	110.0	2.8	2	111.6	3.6	7	109.9	4.9	16
NT	118.2	5.1	13	108.4	8.2	13	117.0	5.4	16	111.0	5.6	20	113.5	7.1	62
R	113.2	6.7	173	104.5	5.4	4	114.0	5.4	163	112.0	0.0	1	113.5	6.2	341
	F= 6.765*			F= 0.487			F= 2.943			F= 0.050			F= 2.423		
4: T	125.0	0.0	1	129.0	9.4	10	114.0	0.0	1	125.0	6.1	4	126.8	8.7	16
NT	122.7	11.6	19	119.1	7.8	22	126.1	8.3	15	117.1	9.6	15	121.1	9.8	71
R	130.5	9.9	118	116.5	13.6	4	129.8	7.9	134	122.5	11.3	4	129.8	9.2	260
	F= 9.798**			F= 4.985*			F= 2.936			F= 1.384			F=24.805**		
5: T	134.8	17.7	5	127.1	10.4	8	132.0	3.6	3	123.0	11.7	7	128.2	12.3	23
NT	130.5	11.7	15	122.8	9.9	12	135.5	10.9	19	122.8	7.2	13	128.8	11.4	59
R	138.3	10.5	132	146.0	0.0	1	136.4	9.6	123	131.2	2.6	4	137.3	10.0	260
	F= 3.565*			F= 0.906			F= 0.357			F= 1.676			F=21.431**		

Posttransfer arithmetic performance is shown in Table 6-15. Here, the order of means is consistent with that found for IQ and reading achievement. Means are highest among receiving-school pupils, lowest among transfer pupils (though close to the nontransfer mean at grade 4). Differences at all three grade levels are significant. The discrepancy between transfer and receiving-school means increases from grade 3 (7 months) to grade 5 (12 months). As with the pretransfer data, the relationship between transfer and nontransfer means is inconsistent from grade to grade, although the largest gap (8 months) occurs at the highest grade level.

When race and sex are taken into account, only one significant difference is found in posttransfer arithmetic performance, that among Negro girls at grade 3. In that cell, the highest mean occurs in the transfer group. No consistent order of means is evident across cells, however.

Sex differences are generally not large, and within both racial groups they favor boys and girls about equally. Differences between Negro and white pupils are substantial in most instances, and consistently so for boys; as with the pretransfer data, the higher means are those of white pupils.

Grade-placement equivalents for pre- and posttransfer arithmetic performance appear in Table 6-16. As was true of reading performance, mean arithmetic scores for the transfer group show that group to be closer to national norms than to the two comparison groups employed in this study. Within the transfer group, fourth-grade pupils in the posttransfer year, and fifth-grade pupils in both years, scored somewhat below the expected grade placement; the largest deficit (6 months) is seen in the posttransfer performance of fifth-graders. Pretransfer means for grade 4, and third-grade means for both years, are seen to be somewhat above expected grade placement.

Table 6-15. ARITHMETIC PERFORMANCE: POSTTRANSFER YEAR
(Age-Equivalent Scores)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
3: T	--	--	0	117.2	9.4	5	122.0	0.0	1	126.3	2.9	7	122.5	7.3	13
NT	133.3	10.5	13	115.6	10.3	10	132.6	9.1	16	124.7	6.1	15	127.4	11.0	54
R	130.0	11.1	118	116.5	13.2	4	130.0	9.2	125	115.0	2.8	2	129.7	10.3	249
	F= 1.049			F= 0.039			F= 1.155			F= 3.675*			F= 3.752*		
4: T	--	--	0	132.5	8.5	8	--	--	0	122.5	4.0	4	129.2	8.6	12
NT	133.2	13.6	19	124.0	12.3	16	136.3	11.3	12	123.0	8.2	3	129.7	13.0	55
R	137.3	11.5	79	121.0	0.0	1	137.8	7.8	98	127.0	8.5	2	137.4	9.7	180
	F= 1.820			F= 3.061			F= 0.343			F= 0.282			F=13.436**		
5: T	147.0	12.2	5	132.3	10.8	7	141.0	1.4	2	132.5	11.0	6	136.9	12.0	20
NT	146.8	12.1	14	136.8	16.8	9	153.3	8.7	18	135.1	7.0	15	144.1	13.1	56
R	149.7	11.3	137	134.0	10.0	3	147.4	11.8	134	137.4	5.0	5	148.2	11.6	279
	F= 0.507			F= 0.206			F= 2.513			F= 0.562			F=10.236**		

Table 6-16. ARITHMETIC PERFORMANCE:
GRADE-PLACEMENT EQUIVALENTS OF AGE-LEVEL MEANS

Group	Pretransfer		Posttransfer	
	Expected	Obtained	Expected	Obtained
3: T	3.5	3.7	4.5	4.8
NT		4.0		5.1
R		4.0		5.4
4: T	4.5	5.1	5.5	5.3
NT		4.6		5.4
R		5.4		5.9
5: T	5.5	5.2	6.5	5.9
NT		5.3		6.5
R		5.9		6.8

4. Promotion Status

Additional indicators of academic performance were obtained from school promotion records. It should be noted that special promotion practices (i.e., nonpromotion and double promotion) are not intended as rewards or penalties for performance in school. Decisions to employ these practices rest on judgments of overall maturity in a child. In a school setting, however, achievement is necessarily a primary factor in those judgments. Almost always, certainly, it is the academic performance of a child that leads to consideration of an alternative to normal promotion. Thus, the promotion status of a group can be taken as another kind of yardstick for achievement.

Frequency of nonpromotion (i.e., grade retention) and double promotion was determined for the three populations from school records, dating from the year of entry into school through the end of the posttransfer year.

Nonpromotion

The distribution of pupils retained is shown in Table 6-17. As the table indicates, nearly a fifth of the transfer pupils had, by the end of the posttransfer year, been retained at some time during their school careers. Relatively fewer retentions were reported in

Table 6-17. NUMBER OF PUPILS RETAINED:[a] FROM YEAR OF ENTRY THROUGH POSTTRANSFER YEAR

Group	White boys	Negro boys	White girls	Negro girls	Total[b]
K-1: T	2	3	0	3	8 (20%)
NT	4	4	1	3	12 (10%)
R	24	5	7	3	39 (7%)
2-3: T	0	5	0	2	7 (17%)
NT	3	4	0	6	13 (12%)
R	21	5	13	2	41 (7%)
4-5: T	0	3	0	4	7 (21%)
NT	6	4	1	4	15 (13%)
R	25	2	13	0	40 (9%)
% all grades:	10	26	4	17	9

[a] Three pupils (one NT, two R) were retained twice but are represented as single entries in the table.

[b] Overall percent by population: transfer (n = 115), 19%; nontransfer (n = 340), 12%; receiving schools (n = 1611), 7%.

the nontransfer group (12%) and the receiving-school group (7%).

Both sex and race differences are apparent in the nonpromotion data, indicating that more boys than girls are retained, and more Negro pupils than white pupils.

A separate tally was made of retentions for the posttransfer year. At the end of that year, 5 transfer pupils in the K-1 group were retained, and none in the other grades. Those five pupils comprised 4 percent of the transfer group. Corresponding percentages for the nontransfer and receiving-school groups were 2 and 1, respectively.

Double Promotion

Double promotion is a relatively infrequent occurrence in the Ann Arbor schools. From the year of entry through the end of the posttransfer year, pupils who had been double-promoted were distributed as follows: in the transfer group, 0; in the nontransfer group, 3 (1%); in the receiving-school group, 14 (1%). These 17 pupils included 10 girls and 7 boys. Two were Negro, both in the nontransfer group; the rest were white.

5. Summary

Academic performance of the transfer group can be summarized as generally poorer than that of the nontransfer and receiving-school groups, both before the transfer and one year after its implementation. This is demonstrated by a higher incidence of nonpromotion in the transfer group, and by generally lower mean scores on standardized tests of scholastic aptitude, reading, and arithmetic. That the discrepant test results are in part a reflection of atypically high levels of performance among children in this community is suggested by a different yardstick: national norms for standardized tests. The performance of transfer pupils does not depart markedly from "normal" expectancy for age and grade, by that yardstick, and among the younger pupils particularly, test-based expectancies are sometimes exceeded.

When transfer pupils are compared with the nontransfer and receiving-school groups, without regard for race or sex, group means on standardized tests typically show the order R>NT>T, and differences in most cases are statistically significant. When the populations are divided by race and sex, this pattern dissipates to a greater or lesser degree, and few significant differences are found. It is suggested that the differing racial composition of the three groups may be a major factor in this general finding. Differences between white and Negro pupils are substantial, on the whole, and the advantage generally lies with the white child.

Pretransfer data are shown to be reasonably good predictors of group performance in the posttransfer year. As would be expected, all groups demonstrate improved post-transfer performance on standardized tests. The largest gains, however, tend to be made by receiving-school pupils, whose initial performance levels were highest; transfer pupils, with lower initial performance levels, tend to gain less. Thus, the widening achievement gap reported nationally for white and black children as they progress through the grades finds some measure of support here, particularly in reading achievement. Insofar as impact can be measured after one year of desegregated schooling, the desegregation experience provided to Ann Arbor ghetto children cannot be said to have altered this phenomenon appreciably for the transfer group as a whole.[1] Some transfer children showed unexpected improvement over the posttransfer year; others showed little or none.

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[1] See Appendix C for subsequent achievement data, based on routinely administered standardized tests.

Chapter 7

SELF-ESTEEM, MOTIVATION, AND PERSONAL ASPIRATION

The present chapter incorporates a variety of measures which, as a group, focus on the child's perceptions of himself and his worth -- as a person, a member of his class in school, and a future adult. Included are measures of self-esteem, motivation, and expressed aspirations for adulthood.

1. Self-Esteem

The Coopersmith Self-Esteem Inventory was administered to pupils in grades 2-5. This questionnaire consists of a series of statements which the child checks as being "like me" or "unlike me." Of the 42 items scored for self-esteem,[1] 26 focus on the child's general sense of self-satisfaction (e.g., "There are lots of things about myself I'd change if I could," "I can usually take care of myself," "I can make up my mind without too much trouble"). Eight items each relate to the child's feelings about himself vis-à-vis his peers (e.g., "I'm popular with kids my own age") and his school experience (e.g., "I'm doing the best work that I can"). Pre- and posttransfer correlations of these three components -- personal, social, and school -- with the total self-esteem score ranged between .75 and .94, suggesting that separate analysis of the components would contribute little unique information. Hence, only total scores were analyzed.

Because of their age and inexperience with test-taking, pupils in grades K and 1 were given no self-report measures. Where assessment of a particular characteristic rested solely on such measures, this meant that no information could be generated for these younger children. In the case of self-esteem, an alternative was sought in the Lambert-Bower Picture Game, in which 64 pictures of children at play, in school, with the family, etc., are categorized by the child as happy or unhappy. All but 10 of the pictures are affectively neutral (i.e., ambiguous); thus, the greater the number perceived by the child as depicting happy situations, the more positive his general self-attitudes are presumed to be.

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[1] Sixteen additional items, comprising a so-called "validity" scale and a "child-family relationships" scale, were found to be of low reliability in previous local usage and consequently were not scored in the present study.

The correlation between the Lambert-Bower and Coopersmith measures, based on 169 second-grade pupils who were administered both measures during the pretransfer year, is statistically significant but very small ($\underline{r} = .18$). For that sample, at least, the two instruments share little common variance and appear to be measuring different attributes. The Picture Game data cannot, therefore, be viewed as a downward extension of the assessment made of older children via the Coopersmith inventory.

Lambert-Bower Picture Game

Pre- and posttransfer data from the Picture Game are presented in Table 7-1. It will be noted here, and for most other measures yet to be discussed, that two sets of posttransfer data are presented: one set gathered at the beginning of the posttransfer year, the other at the end of that year.

No consistent posttransfer differences appear among the three populations as a whole. A significant pretransfer difference shows both transfer and nontransfer pupils scoring somewhat below the receiving-school group. In the early posttransfer assessment, however, the transfer group mean rises above those of the other two groups, though not significantly so; at the end of the posttransfer year, means for the three groups are virtually identical.

When the data are examined within race-sex groups, only one significant difference is found, but some trends can be identified. Among Negro girls, means for the transfer group are at least as high as, and in the posttransfer year higher than, means for the counterpart nontransfer and receiving-school groups. This difference is significant for the fall posttransfer measure. Among Negro boys, an opposite trend is suggested: except for the final posttransfer measure, on which Negro receiving-school boys score below the other two groups, the lowest mean scores occur in the transfer group. Generally speaking, it would appear that the small disparity in the pretransfer means of transfer and receiving-school pupils was essentially compensated over the posttransfer year, as Negro transfer pupils tended to gain on their counterparts in the other two groups. The number of white transfer pupils is too small to permit generalization, but the relatively high pretransfer scores of these pupils are seen

Table 7-1. LAMBERT-BOWER PICTURE GAME: PRE- AND POSTTRANSFER YEARS

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Pretransfer								
K-1: T	31.8	15.4	6	25.6	9.2	26	34.2	4.3	4	29.8	12.5	26	28.5	11.3	62
NT	26.8	7.3	41	27.4	9.9	27	30.4	9.1	37	27.1	9.6	39	27.9	8.9	144
R	28.8	7.6	146	25.7	4.2	3	32.2	8.9	146	29.8	14.4	4	30.4	8.5	299
	F= 1.637			F= 0.261			F= 0.739			F= 0.508			F= 4.190*		
							Posttransfer 1 (Fall)								
K-1: T	27.8	9.2	5	27.1	9.6	19	35.0	0.0	1	33.5	8.2	20	30.2	9.2	45
NT	26.7	6.9	37	29.7	7.1	19	30.0	10.2	32	27.1	7.9	29	28.2	8.2	117
R	27.4	8.2	289	28.6	12.4	11	29.6	8.6	274	26.9	10.3	8	28.5	8.6	582
	F= 0.148			F= 0.372			F= 0.038			F= 3.889*			F= 0.936		
							Posttransfer 2 (Spring)								
K-1: T	26.0	10.0	4	28.2	7.0	15	30.5	3.5	2	31.2	8.6	19	29.5	8.0	40
NT	29.6	5.2	35	29.7	7.4	19	31.1	7.7	34	28.3	7.5	27	29.8	6.9	115
R	29.2	5.9	278	24.3	10.6	12	31.7	5.7	267	25.6	13.8	8	30.2	6.2	565
	F= 0.679			F= 1.603			F= 0.150			F= 1.207			F= 0.407		

to diminish somewhat over the posttransfer year.

Race and sex differences are apparent, but not always consistent. Means for girls are generally higher than those for boys, with some exceptions evident among Negro pupils. Means for white pupils tend to be higher than those for Negroes, but this is not consistently true for boys.

Within-group change scores for the smaller number of pupils tested on all three occasions are shown in Table 7-2. The few significant changes, all positive, are limited to white boys in the nontransfer and receiving-school groups. However, the data lend support to the diminishing scores of white transfer pupils, and an early gain in the scores of Negro transfer pupils. That gain is seen to be sustained over the posttransfer year for Negro boys, on the whole, but appears transitory for at least some Negro girls. The latter show a net decrease from fall to spring of the posttransfer year that approximates the net gain occurring between the pretransfer and fall posttransfer measures. Taken in conjunction with the data presented in Table 7-1, this might suggest that the pretransfer mean for Negro girls reflected the presence, in the transfer group, of some low-scoring pupils who were subsequently lost from the sample.

Coopersmith S-E Inventory

Pretransfer data for the Coopersmith self-esteem measure are shown in Table 7-3. For the populations as a whole, significant differences are seen in both grade groups, showing means for the transfer pupils to be lower than those for the nontransfer and receiving-school pupils. Means for the latter two groups are similar, a slight advantage going to the receiving-school group in grades 2-3 and to the nontransfer group in grades 4-5.

The finding of lower means in the transfer group holds in most cases when the populations are divided by race and sex, although striking differences occur only among white pupils in grades 4-5. There, means for the transfer group are 5-6 points below the receiving-school means and 8-10 points below the nontransfer means; they are somewhat lower than the means for Negro transfer pupils as well. Inspection of the data shows no consistent race or sex differences in the pretransfer Coopersmith scores.

Posttransfer Coopersmith data appear in Table 7-4, and confirm the generally lower self-esteem found for transfer

Table 7-2. CHANGE IN LAMBERT-BOWER PICTURE GAME SCORES: PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
								Pretransfer to Posttransfer 1 (Fall)					
K-1:	T	- 4.2	11.3	4	+ 3.2	8.8	14	0.0	0.0	1	+ 2.7	11.5	19
	NT	+ 1.0	6.7	29	+ 0.2	8.5	18	- 0.6	10.5	28	- 0.3	9.9	26
	R	- 1.6	7.8	76	+ 1.0	1.7	3	- 1.1	8.7	71	--	--	0
								Posttransfer 1 to Posttransfer 2 (Spring)					
K-1:	T	- 3.2	3.0	4	- 0.1	9.4	14	- 2.0	0.0	1	- 2.6	8.0	19
	NT	+ 3.4*	7.2	29	+ 0.2	8.2	18	+ 1.5	8.9	28	+ 1.7	6.4	26
	R	+ 2.3**	7.2	76	- 4.0	0.0	3	+ 0.7	7.3	71	--	--	0
								Pretransfer to Posttransfer 2 (Spring)					
K-1:	T	- 7.5	10.1	4	+ 3.1	9.4	14	- 2.0	0.0	1	+ 0.1	13.2	19
	NT	+ 4.4**	5.5	29	+ 0.4	8.0	18	+ 1.0	8.5	28	+ 1.4	11.3	26
	R	+ 0.8	8.0	76	- 3.0	1.7	3	- 0.4	9.4	71	--	--	0

Table 7-3. COOPERSMITH SELF-ESTEEM INVENTORY: PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	29.5	9.7	4	24.0	3.9	21	29.0	6.3	4	26.1	6.9	26	25.7	6.2	55
NT	29.4	7.0	31	25.5	6.7	28	30.1	6.9	34	27.2	6.0	38	28.1	6.8	131
R	29.0	6.6	164	--	--	0	30.2	6.4	140	--	--	0	29.5	6.5	304
	F= 0.056			F= 0.844			F= 0.070			F= 0.467			F= 8.658**		
4-5: T	23.3	7.6	6	27.3	7.2	18	23.5	8.7	4	25.8	6.9	12	25.9	7.2	40
NT	31.3	7.0	34	27.3	7.0	34	33.3	7.2	34	26.9	7.0	28	29.8	7.5	130
R	29.2	6.5	99	30.0	0.0	1	28.2	7.1	103	27.5	6.5	4	28.7	6.8	207
	F= 3.958*			F= 0.000			F= 7.989**			F= 0.135			F= 4.905**		

Table 7-4. COOPERSMITH SELF-ESTEEM INVENTORY: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
2-3: T	28.0	11.5	3	24.9	5.3	17	27.0	0.0	1	27.5	6.9	23	26.5	6.5	44
NT	31.5	8.0	28	26.9	7.4	21	31.6	6.6	34	26.2	5.2	35	29.1	7.1	118
R	28.7	7.5	285	24.4	5.3	7	30.3	7.1	276	25.0	5.7	6	29.4	7.3	574
	F= 1.771			F= 0.658			F= 0.937			F= 0.562			F= 3.244*		
4-5: T	22.6	7.2	5	28.1	7.1	16	22.0	15.1	3	26.1	7.1	10	26.1	7.9	34
NT	30.7	8.1	35	27.6	7.8	28	33.7	7.8	34	27.2	7.1	24	30.1	8.1	121
R	30.6	7.8	213	31.0	2.6	3	30.3	7.3	236	28.0	7.6	6	30.4	7.5	458
	F= 2.564			F= 0.280			F= 5.110**			F= 0.146			F= 4.974**		
							Posttransfer 2 (Spring)								
2-3: T	28.7	12.6	3	23.3	4.9	13	24.0	9.9	2	29.3	7.2	22	27.0	7.4	40
NT	31.6	6.9	28	26.2	5.6	20	31.7	8.2	35	27.4	5.1	32	29.5	7.0	115
R	30.5	7.7	282	25.0	8.8	8	31.8	7.3	271	25.2	7.5	10	30.9	7.6	571
	F= 0.338			F= 0.900			F= 1.079			F= 1.567			F= 6.188**		
4-5: T	26.8	5.9	5	30.8	6.6	16	27.0	11.0	3	26.7	7.7	10	28.7	7.2	34
NT	31.0	8.5	34	30.0	6.8	25	35.6	6.6	30	29.9	7.5	23	31.8	7.7	112
R	32.9	6.9	216	26.6	5.1	5	32.2	7.4	232	31.4	6.5	7	32.4	7.2	460
	F= 2.625			F= 0.780			F= 3.782*			F= 0.981			F= 4.294*		

pupils in the pretransfer year. Differences are again significant in both grade groups, and for both the fall and spring posttransfer measures. As with the pretransfer data, means for the nontransfer and receiving-school groups are similar.

When the data are examined within race-sex groups, the same general pattern holds consistently for white pupils of both sexes, and as with the pretransfer data, the differences are striking at grades 4-5 (though significant only for girls). No significant differences occur among the Negro groups, and no consistent pattern is evident. Means for girls of both races are in most cases slightly above those for boys, but the differences are not impressive. Differences between white and Negro pupils tend to be somewhat larger, but do not favor one racial group over the other with any consistency.

The analysis of change scores for the Coopersmith Inventory is reported in Table 7-5. Statistically significant gains in self-esteem from the pretransfer year to the end of the posttransfer year are seen in all white receiving-school groups and in two of the white nontransfer groups (boys in grades 2-3, girls in grades 4-5), but nowhere else. Small to moderate net gains over the year characterize the transfer group except at grades 2-3, where Negro boys and the one white girl show no overall change from pretransfer values. The one significant gain in the transfer group is that occurring between fall and spring of the posttransfer year in Negro fourth- and fifth-grade boys. Coupled with essentially no change between the pretransfer and first posttransfer scores, however, that group's net gain for the year is not significant. Substantial overall gains were demonstrated by white transfer boys and girls in grades 4-5, but failed to reach statistical significance, given the small n's and considerable variability in those groups.

On the whole, the Coopersmith data reinforce reports in the literature in indicating lower self-esteem to be characteristic of ghetto children. Differential gains favoring the transfer group were not consistently demonstrated, and the disparity between group means was much the same at the end of one year of desegregated schooling as it was prior to the transfer.

Table 7-5. CHANGE IN COOPERSMITH S-E SCORES: PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
Pretransfer to Posttransfer 1 (Fall)													
2-3:	T	0.0	2.9	3	+ 1.6	7.6	12	- 4.0	0.0	1	+ 1.2	5.0	22
	NT	+ 1.7	4.7	25	+ 1.2	8.0	18	+ 1.6	6.5	30	+ 0.2	5.7	27
	R	+ 0.6	6.5	103	--	--	0	+ 0.2	5.9	92	--	--	0
4-5:	T	- 0.2	6.7	5	- 0.2	6.4	16	- 4.5	2.1	2	+ 0.6	4.8	10
	NT	+ 0.2	6.0	30	- 1.0	6.0	24	+ 2.1*	5.3	29	- 0.1	5.4	21
	R	+ 1.9*	6.5	50	- 1.0	0.0	1	+ 0.9	5.0	61	+ 3.5	6.4	2
Posttransfer 1 to Posttransfer 2 (Spring)													
2-3:	T	+ 0.7	1.2	3	- 1.7	7.0	12	+ 4.0	0.0	1	+ 1.5	5.7	22
	NT	+ 1.2	5.2	25	- 0.2	5.6	18	+ 0.9	7.6	30	+ 1.1	7.1	27
	R	+ 2.4**	5.4	103	--	--	0	+ 1.5**	5.0	92	--	--	0
4-5:	T	+ 4.2	4.9	5	+ 2.8*	4.9	16	+13.0	7.1	2	+ 0.6	8.2	10
	NT	0.0	4.9	30	+ 1.9	6.5	24	+ 0.4	3.9	29	+ 2.4	5.9	21
	R	+ 0.9	5.0	50	- 1.0	0.0	1	+ 2.0**	5.8	61	+ 3.5	2.1	2
Pretransfer to Posttransfer 2 (Spring)													
2-3:	T	+ 0.7	3.5	3	- 0.1	7.3	12	0.0	0.0	1	+ 2.7	7.0	22
	NT	+ 3.0*	6.5	25	+ 1.0	8.0	18	+ 2.5	8.7	30	+ 1.3	7.5	27
	R	+ 3.0**	6.9	103	--	--	0	+ 1.7*	6.2	92	--	--	0
4-5:	T	+ 4.0	9.5	5	+ 2.5	7.0	16	+ 8.5	9.2	2	+ 1.2	7.0	10
	NT	+ 0.2	6.4	30	+ 0.8	5.4	24.	+ 2.5*	6.0	29	+ 2.2	6.5	21
	R	+ 2.8**	5.0	50	- 2.0	0.0	1	+ 2.9**	5.8	61	+ 7.0	4.2	2

2. Motivation

Of particular scientific interest, because of its broad research base, is achievement motivation. A detailed report on this special substudy appears as Appendix D of this report. The findings are summarized briefly at the end of this section.

The Classroom Questionnaire and School Attitudes Card Sort, administered in grades 2-5, provide two self-report measures relating to motivation. From the latter instrument, the measure is a 7-item scale called Academic Success and Morale. The child responds to each of the seven statements on a 4-point scale (maximum score 28), indicating whether the statement is true for him most of the time, sometimes, hardly ever, or never. Item content deals with the child's perceptions of his school performance (e.g., "I'm proud of my school work," "I do as well in school as most of the kids in my class") and with his interest in school (e.g., "School is fun," "What we learn in school is important to know").

The 6-item Motivation scale from the Classroom Questionnaire is of much the same format, with each item response earning 1-4 points. Content focuses primarily on the child's interest and attentiveness in school (e.g., "I like being in this class," "Do you find yourself thinking of other things when you're supposed to be doing the class work?").

Correlations between the two scales are positive but moderate, indicating considerable independence in the two measures. Obtained coefficients ranged from .38 in the pretransfer year to .54 and .57 for the two posttransfer assessments.

SA: Academic Success and Morale

Pretransfer data for the School Attitudes motivational measure appear in Table 7-6. Differences between means for the populations as a whole are statistically significant but very small. The lowest means, occurring in the transfer group, differ by less than a point and a half from the highest means, which are found for receiving-school pupils.

When race and sex are taken into account, no significant pretransfer differences are found among the three groups. Means for white pupils are higher in nearly every case than means for Negro pupils, but the differences are generally small. Sex differences are neither large nor consistent, on

Table 7-6. ACADEMIC SUCCESS AND MORALE (SA): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	27.0	0.0	4	23.1	3.7	21	23.2	2.4	4	22.9	2.8	26	23.3	3.2	55
NT	23.5	4.3	31	22.5	3.1	28	25.2	2.4	34	23.0	3.4	38	23.6	3.5	131
R	24.2	2.8	114	23.4	2.3	5	25.2	2.2	118	23.5	6.4	2	24.7	2.5	239
	F= 2.277			F= 0.251			F= 1.558			F= 0.037			F= 8.692**		
4-5: T	25.7	1.5	6	24.3	2.1	18	19.8	5.4	4	22.3	3.4	12	23.5	3.3	40
NT	23.5	3.9	34	22.9	3.7	34	25.2	2.7	34	23.2	2.7	28	23.7	3.4	130
R	24.5	2.6	99	24.0	1.2	5	25.0	1.8	95	23.4	2.9	7	24.7	2.3	206
	F= 2.167			F= 1.230			F=11.392**			F= 0.451			F= 6.380**		

the whole, but some interesting trends are evident. Girls in the transfer group scored somewhat below nontransfer and receiving-school girls, on the average, while transfer boys scored slightly above their counterparts in the other two groups. Within the transfer group, mean scores for boys (and particularly white boys) are consistently higher than those for girls of the same race. In the nontransfer and receiving-school groups, on the other hand, the small mean differences generally favor the girls.

Posttransfer data for Academic Success and Morale, reported in Table 7-7, reveal little that is different. Significant differences occur only among the total groups, are of about the same magnitude as pretransfer differences, and show the transfer group scoring somewhat below the nontransfer and receiving-school groups. White pupils continued to score above Negroes, as a rule, but other trends noted in the pretransfer data are less apparent here. Within the transfer group, posttransfer means for boys are less consistently higher than those for girls. On the whole, the means for transfer girls continue to be slightly below the means for nontransfer and receiving-school girls; but the slightly higher means found previously for transfer boys, relative to their counterparts in the other two groups, are not consistently apparent in the posttransfer data.

That the motivational characteristics measured by this School Attitudes scale are relatively stable over the period of a year is evident from the analysis of change scores, presented in Table 7-8. Among those cells containing enough cases to warrant consideration, only a handful show changes greater than one raw score point, none are as great as two points, and only two are statistically significant (both in the nontransfer group). Over the one-year period, boys in the transfer group are seen to show a small decrement, overall. Receiving-school boys and Negro nontransfer boys show a small increment in score. For the same period, the three white transfer girls demonstrate gains, as do Negro nontransfer girls in grades 2-3. With these exceptions, the girls studied show little or no change from pretransfer values.

CQ: Motivation

Pretransfer data for the Classroom Questionnaire Motivation scale are shown in Table 7-9. As with the School Attitudes measure discussed above, significant differences occur for the total populations in both grade groups and show the lowest means to be those of the transfer group. In

Table 7-7. ACADEMIC SUCCESS AND MORALE (SA): POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 1 (Fall)								
2-3:	T	22.7	7.5	3	22.3	3.1	17	24.0	0.0	1	23.3	3.3	23	22.9	3.5	44
	NT	24.7	3.5	28	23.2	3.3	21	24.6	3.4	33	23.6	3.2	36	24.1	3.3	118
	R	23.8	3.1	285	22.9	5.3	7	24.8	2.6	275	22.1	3.0	7	24.2	2.9	574
		F= 1.152			F= 0.332			F= 0.146			F= 0.594			F= 3.973*		
4-5:	T	24.6	2.3	5	23.7	2.4	16	24.3	4.7	3	22.6	2.1	10	23.6	2.5	34
	NT	24.4	3.8	35	23.2	3.4	28	25.7	2.9	34	23.4	1.9	24	24.3	3.3	121
	R	24.4	3.0	213	21.3	4.2	3	25.1	2.5	234	24.3	2.4	6	24.7	2.7	456
		F= 0.010			F= 0.724			F= 1.065			F= 1.377			F= 3.336*		
								Posttransfer 2 (Spring)								
2-3:	T	24.7	3.5	3	20.7	4.0	13	21.5	5.0	2	22.8	3.8	22	22.2	3.9	40
	NT	24.3	3.7	28	22.5	3.0	20	25.3	3.0	35	24.6	3.0	32	24.4	3.3	115
	R	24.1	3.0	282	24.4	3.0	9	25.0	2.8	270	22.9	4.1	10	24.5	3.0	571
		F= 0.110			F= 3.431			F= 1.745			F= 1.966			F=10.385**		
4-5:	T	25.8	2.7	5	23.6	2.7	16	23.3	2.9	3	22.8	2.4	10	23.6	2.7	34
	NT	24.2	2.9	34	23.2	3.7	25	26.2	2.4	30	23.7	2.1	23	24.4	3.0	112
	R	24.7	2.7	217	22.0	3.2	5	25.5	2.3	232	24.3	1.5	7	25.1	2.6	461
		F= 0.878			F= 0.414			F= 2.607			F= 1.133			F= 6.496**		

Table 7-8. CHANGE IN ACADEMIC SUCCESS AND MORALE (SA): PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)						
2-3:	T	- 4.3	7.5	3	- 0.5	3.2	13	+ 1.0	0.0	1	+ 0.1	3.9	22
	NT	+ 1.6*	3.3	25	+ 0.8	2.9	18	- 0.4	3.4	30	+ 0.8	3.1	27
	R	- 0.2	2.7	54	--	--	0	- 0.5	2.6	60	--	--	0
4-5:	T	- 0.8	2.4	5	- 0.7	2.9	16	+ 5.5	0.7	2	+ 0.1	3.3	10
	NT	+ 0.8	3.4	30	+ 0.5	4.1	24	+ 0.6	2.1	29	+ 0.4	2.2	21
	R	+ 0.3	2.0	67	- 1.0	2.8	2	+ 0.3	1.8	57	+ 3.0	1.4	2
							Posttransfer 1 to Posttransfer 2 (Spring)						
2-3:	T	+ 2.0	4.6	3	- 1.0	3.0	13	+ 1.0	0.0	1	- 0.5	4.0	22
	NT	- 0.3	2.1	25	- 0.8	3.3	18	+ 0.8	3.4	30	+ 1.0	2.4	27
	R	- 0.2	3.1	54	--	--	0	+ 0.2	3.0	60	--	--	0
4-5:	T	+ 1.2	1.9	5	- 0.1	1.8	16	0.0	1.0	2	+ 0.2	2.5	10
	NT	+ 0.2	3.1	30	- 0.5	3.6	24	+ 0.2	1.5	29	+ 0.1	1.7	21
	R	+ 0.1	1.8	67	+ 0.5	0.7	2	+ 0.2	2.2	57	- 3.0	0.0	2
							Pretransfer to Posttransfer 2 (Spring)						
2-3:	T	- 2.3	3.5	3	- 1.5	2.8	13	+ 2.0	0.0	1	- 0.5	2.9	22
	NT	+ 1.3	3.4	25	0.0	4.2	18	+ 0.4	2.6	30	+ 1.7**	2.8	27
	R	- 0.4	3.5	54	--	--	0	- 0.3	2.4	60	--	--	0
4-5:	T	+ 0.4	2.3	5	- 0.8	3.4	16	+ 5.5	0.7	2	+ 0.3	4.9	10
	NT	+ 1.1	3.6	30	+ 0.1	4.1	24	+ 0.7	2.1	29	+ 0.5	2.5	21
	R	+ 0.4	2.2	67	- 0.5	2.1	2	+ 0.5	2.0	57	0.0	1.0	2

Table 7-9. MOTIVATION (CQ): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	15.8	6.2	4	16.0	2.2	21	17.0	4.3	4	16.3	4.3	26	16.2	3.7	55
NT	18.8	3.7	31	17.2	3.4	27	21.0	2.3	33	18.0	3.5	37	18.8	3.5	128
R	17.9	3.9	184	10.0	1.7	3	18.9	3.5	154	14.0	0.0	1	18.3	3.8	342
	F= 1.368			F= 8.481**			F= 6.232**			F= 2.786			F= 9.364**		
4-5: T	18.0	3.5	6	17.4	2.4	18	18.0	5.2	4	17.6	2.9	12	17.6	2.9	40
NT	18.4	3.4	34	17.5	3.9	34	19.8	3.3	34	17.5	3.2	28	18.3	3.6	130
R	18.9	3.7	119	--	--	0	19.7	3.5	99	--	--	0	19.3	3.6	218
	F= 0.352			F= 0.003			F= 0.485			F= 0.002			F= 5.133**		

grades 4-5, the highest mean occurs among receiving-school pupils; in grades 2-3, however, the nontransfer mean is slightly higher than the receiving-school mean. In grades 2-3, likewise, significant differences are found in two of the subgroups (Negro boys, white girls); in both instances nontransfer pupils have the highest means.

Generally speaking, Motivation scores are higher for girls than boys, and higher for white pupils than for Negroes. Interestingly, white transfer pupils consistently scored below white pupils in the nontransfer and receiving-school groups, while the few Negro receiving-school pupils -- also a racial minority in their schools -- scored below Negro pupils in the other two groups.

Posttransfer data for the Motivation scale appear in Table 7-10. Differences among the total groups are significant, and of about the same magnitude as pretransfer differences. The lowest posttransfer means consistently occur in the transfer group, while receiving-school means here are highest throughout. Means for the nontransfer group show a small overall decrement from the pretransfer measure to the final posttransfer measure. Transfer and receiving-school pupils in grades 2-3 show small increments in the first posttransfer measure and smaller decrements thereafter, while in grades 4-5 the means for these two populations show little variation over the three assessment periods.

When race and sex are taken into account, only two significant differences occur, both in the final posttransfer measure. One echoes the significant pretransfer difference for white girls in grades 2-3; here, the two transfer pupils scored well below white nontransfer and receiving-school girls. The other significant difference shows similar means for white transfer and nontransfer boys in grades 4-5 to be somewhat below the mean for white receiving-school boys in those grades.

As with the pretransfer data, posttransfer means for girls are generally slightly higher than those for boys, and white pupils for the most part outscored Negro pupils. Means for Negro boys in the transfer group are, during the posttransfer year, slightly higher than those of Negro nontransfer boys, and generally higher than those of Negro receiving-school boys as well. This is not the case with Negro transfer girls, whose posttransfer means are about the same as, or below, the means for Negro girls in the other two groups.

Table 7-10. MOTIVATION (CQ): POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
Posttransfer 1 (Fall)																
2-3:	T	18.3	7.2	3	17.4	3.4	17	15.0	0.0	1	17.8	4.3	23	17.6	4.1	44
	NT	18.3	3.6	28	16.1	3.8	20	20.2	3.1	34	17.6	4.0	36	18.3	3.8	118
	R	18.3	3.9	285	16.7	3.9	7	20.2	3.2	276	20.2	3.8.	6	19.2	3.7	574
		F= 0.000			F= 0.541			F= 0.006			F= 0.998			F= 6.114**		
4-5:	T	18.0	1.7	5	18.9	3.4	16	18.3	4.0	3	15.4	4.0	10	17.7	3.7	34
	NT	18.1	4.0	35	17.7	4.5	28	19.9	3.7	34	17.9	3.2	24	18.5	3.9	121
	R	18.8	3.8	213	15.0	3.5	3	20.1	3.2	235	17.3	4.4	6	19.4	3.6	457
		F= 0.594			F= 1.222			F= 0.494			F= 1.715			F= 6.235**		
Posttransfer 2 (Spring)																
2-3:	T	16.0	8.5	3	16.6	3.1	13	11.5	0.7	2	17.7	4.6	22	16.9	4.5	40
	NT	19.0	4.0	28	16.3	3.9	19	19.8	3.6	35	17.8	2.9	32	18.5	3.8	114
	R	18.1	4.2	282	16.9	4.1	8	20.0	3.5	271	17.5	3.5	10	18.9	4.0	571
		F= 1.071			F= 0.087			F= 5.815**			F= 0.027			F= 5.268**		
4-5:	T	17.0	2.8	5	18.0	3.3	16	18.3	2.5	3	16.5	4.1	10	17.4	3.4	34
	NT	16.9	3.1	34	16.9	4.7	25	19.3	3.6	30	18.3	2.9	23	17.8	3.7	112
	R	18.9	3.7	216	17.0	1.9	5	20.0	3.4	232	19.1	3.3	7	19.4	3.6	460
		F= 4.987**			F= 0.354			F= 0.725			F= 1.513			F=11.985**		

The means for white transfer girls continue, in the posttransfer year, to fall somewhat below the means for white nontransfer and receiving-school girls. This is not consistently true for white transfer boys, however. Nor is the pretransfer trend toward lower means in Negro receiving-school pupils reflected in the posttransfer data.

The analysis of change scores, reported in Table 7-11, confirms the trends evident in the posttransfer data indicating a small overall decrement in Motivation scores for the nontransfer group, initial increments followed by small decrements for transfer and receiving-school pupils in grades 2-3, and little net change, on the whole, for those two groups in grades 4-5. With one exception, significant gains are limited to the cells with the largest n's -- i.e., white receiving-school pupils. The exception occurs among nontransfer white boys in grades 2-3, who showed the only significant change from fall to spring of the posttransfer year.

At the end of the posttransfer year, Negro pupils had gained somewhat on their nontransfer counterparts, except for girls in grades 4-5, who showed an overall decrement for the year. This general finding is a consequence of both small gains in the transfer group and small decrements in the nontransfer group. The few white transfer pupils show no consistent pattern of change, but on the whole held their own, at least, relative to the nontransfer group.

There is little to be gained by speculation about nonsignificant trends, but an apparent contrast between results for the transfer group on the two motivation scales raises a legitimate question as to what the two scales are measuring. It will be recalled that on the School Attitudes scale discussed previously, boys in the transfer group showed a slight decrement over the posttransfer year, while Negro girls showed little or no change; only the white girls (n = 3) showed a net gain. Both motivation scales deal with the child's interest in school. The School Attitudes measure, however, deals additionally (in 3 of 7 items) with the child's perceptions of his school performance -- i.e., with his academic self-concept. This characteristic is not tapped by the CQ Motivation scale. Viewed in that light, the differing trends seen in the transfer group's performance on the two measures might suggest that the milieu of the predominantly white receiving school tended to stimulate the interest of transfer pupils (and particularly the Negro pupils), while at the same time presenting to these children an

Table 7-11. CHANGE IN MOTIVATION (CQ): PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
								Pretransfer to Posttransfer 1 (Fall)					
2-3:	T	+ 4.0	7.9	3	+ 0.6	3.4	12	- 6.0	0.0	1	+ 1.6	4.2	22
	NT	- 0.8	2.8	25	- 1.3	3.2	16	- 0.4	2.0	30	+ 0.4	4.6	26
	R	+ 2.1**	4.5	97	+ 6.5	0.7	2	+ 1.1*	3.9	81	--	--	0
4-5:	T	+ 1.0	3.9	5	+ 1.4	4.1	16	+ 2.0	2.8	2	- 2.4	3.8	10
	NT	+ 0.1	4.6	30	+ 0.5	3.0	24	+ 0.5	2.9	29	- 0.4	3.3	21
	R	+ 0.3	2.8	89	--	--	0	+ 1.0**	3.0	74	--	--	0
								Posttransfer 1 to Posttransfer 2 (Spring)					
2-3:	T	- 2.3	3.1	3	- 0.2	2.5	12	- 4.0	0.0	1	- 0.3	3.2	22
	NT	+ 1.4*	3.2	25	+ 0.1	3.7	16	- 0.9	3.4	30	- 0.2	3.9	26
	R	- 0.4	3.7	97	- 2.0	1.4	2	+ 0.1	3.7	81	--	--	0
4-5:	T	- 1.0	3.7	5	- 0.9	3.5	16	+ 1.0	1.4	2	+ 1.1	3.3	10
	NT	- 1.3	3.9	30	- 1.3	4.1	24	- 1.1	3.1	29	+ 0.1	2.9	21
	R	+ 0.1	3.1	89	--	--	0	- 0.3	2.8	74	--	--	0
								Pretransfer to Posttransfer 2 (Spring)					
2-3:	T	+ 1.7	6.5	3	+ 0.3	2.5	12	-10.0	0.0	1	+ 1.3	3.3	22
	NT	+ 0.6	3.7	25	- 1.2	2.3	16	- 1.3	3.6	30	+ 0.2	4.4	26
	R	+ 1.7**	5.6	97	+ 4.5	0.7	2	+ 1.2**	3.5	81	--	--	0
4-5:	T	0.0	4.0	5	+ 0.5	3.2	16	+ 3.0	4.2	2	- 1.3	4.1	10
	NT	- 1.2	4.1	30	- 0.8	3.9	24	- 0.6	3.7	29	- 0.2	3.3	21
	R	+ 0.4	3.6	89	--	--	0	+ 0.6	3.7	74	--	--	0

academic context in which they perceived their own performance as less satisfactory.

Achievement Motivation

Two measures of achievement motivation were obtained for pupils in all grades. One, referred to as autonomous achievement motivation, taps the child's own risk-taking preferences. The other, called social comparison achievement motivation, is presumed to reflect his interest in competing with others -- i.e., in achieving favorable comparison with others, or avoiding unfavorable comparison. An extensive report of the findings for these two measures (Veroff & Peele, 1969) will be found in Appendix D.

Abstracting from that report briefly, the findings suggest that the effects of one year of desegregated schooling on achievement motivation are more apparent in Negro boys than in Negro girls. The effects are clearest for autonomous achievement motivation, on which Negro boys in the transfer group showed a significantly greater posttransfer increase than nontransfer Negro boys. There are some trends indicating parallel findings for the social comparison measure, with desegregation tending to combat a proclivity in older Negro boys (grades 2-5) to overaspire, and thus promoting moderate risk-taking in social comparison.

In general, Negro pupils are found to have lower social comparison achievement motivation than white pupils, not necessarily because they have low stated goals but because often they have unrealistically high stated goals. These children seem not to have learned that the setting of moderate goals is necessary to successful competition in school.

For both white and Negro pupils, being part of a racial minority group in school appears to go hand-in-hand with overaspiration, at least in the social comparison measure. While exceptions are found (e.g., Negro boys in the receiving-school group), the general trend may be an important one to recognize in considering programs for desegregation.

Similarly, for white and Negro pupils of low to moderate socioeconomic status, overaspiration seems to go hand-in-hand with attending a school in which the socioeconomic composition deprives the child of regular contact with children of higher socioeconomic status. This finding, in conjunction with the preceding one, suggests that to avoid the encouragement of overaspiration, desegregation programs must cope successfully with two paradoxical factors. They must avoid placing Negro or white children in situations where they perceive themselves as a salient minority group. At the same time, they must provide contact with children of a higher socioeconomic level. To accomplish this would seem to require a program that promotes a thorough intermixing of children of different races and social classes.

Two additional findings should be of special interest to teachers. Shifts in autonomous achievement motivation were found to occur most consistently in the early grades, for pupils of both races. The early elementary years thus may be a critical time for teachers to give attention to the child's goal-setting behavior. Finally, boys consistently set for themselves higher desired levels of social comparison than do girls. This sex difference in expectancy of success may have important implications for the educational process.

3. Personal Aspiration

Inquiring of elementary-age children what they would like to be when they grow up is likely to produce greatly varied and sometimes astonishing answers. This question was asked of children in the study with frank doubts about the reliability of the information to be obtained. And occasional responses like "Superman" or "a fairy princess" did little to allay these doubts; some children, at least, clearly did not respond from a sufficiently mature frame of reference to warrant treatment of their answers as representing thoughtful intent. Most children, however, did respond with an occupational preference.

Responses were scored on the basis of the Bureau of the Census codes used to classify parent occupation (see Chap. 3). The census codes range from 1 to 99; all nonoccupational responses were coded as 0.

Pretransfer data for expressed personal aspiration are presented in Table 7-12. Perhaps the most striking feature of these data is the tremendous variability seen within groups. Despite that variability, however, significant differences are found among the three populations at grades K-1 and 4-5, in each case showing the means for receiving-school pupils to be somewhat higher than those for the transfer and nontransfer groups. At grades 2-3, means for the transfer and receiving-school pupils are

Table 7-12. PERSONAL ASPIRATION: PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	67.2	30.7	5	59.0	37.9	23	57.8	39.4	4	54.0	32.4	23	57.6	34.4	55
NT	59.9	34.1	36	69.3	24.2	26	64.5	32.2	33	52.3	34.6	39	60.6	32.4	134
R	71.4	27.3	133	84.0	15.6	2	62.2	29.3	133	71.0	0.0	2	67.0	28.5	270
	F= 2.274			F= 1.042			F= 0.125			F= 0.299			F= 3.355*		
2-3: T	85.0	13.3	4	70.6	23.1	21	76.2	12.7	4	72.0	19.6	26	72.7	20.2	55
NT	70.3	27.5	31	70.9	27.5	28	65.1	32.6	34	66.1	26.8	37	67.8	28.5	130
R	70.9	27.8	114	79.8	22.1	5	73.6	25.9	117	85.0	19.8	2	72.5	26.6	238
	F= 0.528			F= 0.289			F= 1.332			F= 0.925			F= 1.424		
4-5: T	73.3	38.3	6	70.3	21.6	18	82.8	8.5	4	68.8	26.7	12	71.6	24.8	40
NT	74.4	25.6	33	62.7	27.3	31	82.3	12.3	32	66.3	29.4	27	71.7	25.2	123
R	79.7	22.8	99	60.6	34.1	5	79.1	21.6	95	87.4	7.7	7	79.2	22.3	206
	F= 0.710			F= 0.556			F= 0.369			F= 1.764			F= 4.637*		

comparable, and somewhat above the nontransfer mean, but the difference there is not statistically significant.

No significant differences are evident when the populations are divided by race and sex, and neither race nor sex shows any systematic relationship to the level of expressed aspiration across groups. In the transfer group, however, white pupils at each of the grade levels aspire to somewhat more prestigeful occupations, on the average, than do Negro pupils of the same sex. In the receiving-school group, the reverse tends to be true: except for boys in grades 4-5, the means for Negroes exceed those for white pupils of the same sex. In the nontransfer group, differences in the expressed aspirations of white and Negro pupils show no consistent pattern.

Posttransfer data for personal aspiration appear in Table 7-13. Within-group variability is seen to have diminished somewhat among the younger pupils, but it remains substantial at all grade levels. Differences between the three populations take much the same form as did pretransfer differences, although by the end of the posttransfer year the mean for transfer pupils in grades 2-3 had dropped below the means of the other two groups, so that the lowest means at all grade levels occurred in the transfer group. However, no significant differences were found in the posttransfer measures.

Pre- to posttransfer differences reflect a progressive positive-to-negative shift from lower to upper grades. Within each of the three populations, the final posttransfer measure for grades K-1 shows a mean increment over the pretransfer value. For grades 2-3, the final posttransfer measure shows a smaller increment or, in the transfer group, a decrement. For grades 4-5, a negligible increment is seen in the nontransfer group, and decrements of several points in the transfer and receiving-school groups.

As with the pretransfer data, race and sex show no consistent relationship to posttransfer aspiration across groups. Trends noted in the pretransfer data, suggesting somewhat higher aspirations for white pupils in the transfer group and for Negro receiving-school pupils, relative to their racial opposites, are not evident with any consistency in the posttransfer findings.

Extensive analysis was not planned for the personal aspiration measure. As noted earlier, the measure was included

Table 7-13. PERSONAL ASPIRATION: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
Posttransfer 1 (Fall)															
K-1: T	53.8	41.1	5	70.8	19.6	19	0.0	0.0	1	61.3	33.9	20	63.1	30.6	45
NT	71.4	19.9	37	68.6	25.9	19	69.0	29.0	32	64.9	24.8	29	68.7	24.6	117
R	70.4	25.6	281	69.1	24.7	10	67.5	25.4	272	77.9	10.8	8	69.1	25.4	571
	F= 1.101			F= 0.045			F= 0.105			F= 1.075			F= 1.136		
2-3: T	77.0	34.7	3	80.2	15.7	17	95.0	0.0	1	72.5	19.1	23	76.3	18.9	44
NT	74.1	24.4	28	68.7	21.5	21	73.9	24.9	33	72.7	19.1	36	72.6	22.3	118
R	77.4	23.2	285	73.7	22.0	7	70.0	27.8	275	78.0	15.7	7	73.8	25.7	574
	F= 0.252			F= 1.621			F= 0.579			F= 0.255			F= 0.350		
4-5: T	90.2	15.8	5	65.2	28.4	16	85.0	12.8	3	67.9	27.6	10	71.4	26.6	34
NT	67.4	29.4	34	67.7	25.5	28	83.1	18.7	34	79.0	18.4	24	74.2	24.5	120
R	78.3	26.1	213	71.7	20.2	3	72.9	26.6	233	83.5	11.1	6	75.6	26.3	455
	F= 3.138*			F= 0.094			F= 2.637			F= 1.427			F= 0.477		

(table continued below)

Table 7-13 (continued)

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 2 (Spring)								
K-1:	T	46.5	31.8	4	60.7	22.6	14	80.0	12.7	2	62.5	33.9	19	61.1	29.1	39
	NT	75.0	18.6	34	59.7	27.4	19	73.6	27.6	32	65.9	23.6	27	69.8	24.5	112
	R	70.9	26.4	275	77.7	19.5	12	70.7	24.4	267	68.4	26.9	8	70.9	25.3	562
		F= 2.221			F= 2.343			F= 0.332			F= 0.149			F= 2.729		
2-3:	T	63.7	37.6	3	65.2	23.3	13	86.5	3.5	2	68.5	15.6	22	68.0	19.8	40
	NT	71.5	31.7	28	69.0	25.5	20	74.4	26.1	35	76.7	17.0	32	73.4	25.2	115
	R	73.4	28.7	282	75.8	17.3	9	73.3	25.1	269	78.2	10.3	10	73.5	26.7	570
		F= 0.211			F= 0.545			F= 0.292			F= 2.162			F= 0.828		
4-5:	T	75.4	20.2	5	62.8	35.6	16	53.3	47.1	3	68.9	28.6	10	65.6	31.9	34
	NT	68.4	30.6	34	74.5	17.8	24	80.6	17.3	30	64.3	29.4	23	72.1	25.2	111
	R	78.9	26.6	217	51.6	34.9	5	72.1	28.7	232	70.9	18.2	7	75.1	27.9	461
		F= 2.223			F= 1.885			F= 1.966			F= 0.196			F= 2.161		

with real reservations, and for exploratory purposes only. Change scores for pupils interviewed on all three occasions were analyzed primarily to determine the stability of expressed levels of aspiration (as distinguished from specific occupational preference) in young children. Net changes from the pretransfer year to the end of the posttransfer year are reported in Table 7-14.

As the table indicates, these changes are in many cases substantial, in all three populations and at all grade levels. Equally important, the large standard deviations indicate great variation in the degree of change for individual pupils within groups. From these data, the expressed occupational aspirations of elementary-age children are subject to wide fluctuation and, at least in individual cases, do not constitute a reliable index of the child's perception of himself as a future adult. The pre- and posttransfer population means, based on large numbers of children, may be useful in providing a general descriptive picture; the observed tendencies toward somewhat lower aspirations for the transfer group as a whole, and somewhat higher aspirations for the receiving-school group as a whole, appear consistently enough in all three assessments to be worth noting.

4. Summary

With the possible exception of pupils in grades K-1, self-esteem in the transfer group appears to have been generally unaffected by the transfer. For the K-1 transfer population, the initial level of self-esteem was comparable to that of their nontransfer counterparts but somewhat below the level demonstrated in the receiving-school group. However, Negro girls and the few white pupils in the transfer group tended to score above their counterparts in the other two populations. The scores of white transfer pupils tended to diminish somewhat over the posttransfer year, while the scores of Negro transfer pupils tended to increase in the fall and either stabilize at that level (boys) or diminish slightly thereafter (girls). The latter, however, continued to score above Negro girls in the other two populations. For the year as a whole, the transfer group showed a slight overall increment; so did the nontransfer group. Thus, initial differences between these two groups and the receiving-school group were essentially compensated, but it is difficult to ascribe the slight gain of the transfer group to the transfer.

Table 7-14. CHANGE IN PERSONAL ASPIRATION: PRETRANSFER TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	-17.0	29.4	3	+ 1.5	38.6	13	0.0	0.0	1	+13.5	39.1	17
NT	+ 9.9	34.8	24	-10.1	34.1	17	+ 4.0	27.6	25	+15.2	38.5	26
R	- 1.0	31.1	60	-40.5	6.4	2	+10.7*	36.2	67	--	--	0
2-3: T	-17.0	29.4	3	- 1.6	31.9	13	0.0	0.0	1	- 1.4	21.5	22
NT	+ 2.4	37.9	25	- 5.6	28.5	18	+14.3*	36.2	30	+10.3*	22.7	26
R	+ 1.0	26.1	54	--	--	0	- 0.2	28.4	60	--	--	0
4-5: T	+ 5.2	34.8	5	- 6.1	34.0	16	-32.0	55.2	2	+ 1.6	28.9	10
NT	- 3.0	17.2	28	+ 9.5	29.6	22	- 3.3	21.3	27	- 3.1	39.9	20
R	+ 0.4	24.8	67	+ 3.5	5.0	2	- 9.3*	31.5	57	- 9.0	12.7	2

At the higher grade levels (2-5), the transfer population showed initially lower self-esteem scores than did pupils in both the nontransfer and receiving-school groups. This pattern was repeated in the posttransfer data, which demonstrated increments of a similar magnitude in the three populations as a whole. In the transfer group, the posttransfer increment at grades 2-3 was largely a reflection of increased scores among Negro girls. At grades 4-5, it reflected moderate gains for all transfer pupils except Negro girls, who showed only a slight increase for the year as a whole.

The findings for grades 2-5 cannot be directly compared with those for grades K-1, inasmuch as different instruments were employed. On both measures, girls tended to score higher than boys of the same race, but no consistent differences were apparent between white and Negro pupils.

On two self-report measures of motivation, the transfer pupils demonstrated initially lower scores than nontransfer and receiving-school pupils. At the end of the posttransfer year, the relative positions of the three populations were unchanged: mean scores on both scales were lowest in the transfer group, followed in order by the nontransfer and receiving-school groups.

Scores on one of these scales, reflecting both interest in school and self-perceived academic competence, proved to be relatively stable over the year. Within the transfer group, however, white and Negro boys tended to show slightly diminished scores, white girls scored slightly above their pretransfer level, and Negro girls showed essentially no change. Irrespective of group membership, white pupils tended to score slightly higher on this scale than Negro pupils of the same sex; no consistent sex differences were apparent.

Scores on the other self-report scale, dealing only with interest in school, assumed a somewhat different pattern. Transfer and receiving-school pupils in grades 2-3 showed small increments early in the posttransfer year and smaller decrements subsequently; in grades 4-5, scores for these two groups showed little variation from their pretransfer levels. The nontransfer group, on the other hand, showed a small overall decrement for the year. During the posttransfer year, Negro transfer boys generally increased their scores sufficiently to equal or exceed the scores of their nontransfer and receiving-school counterparts. Other transfer pupils at best paralleled, and often continued to score below, their counterparts in the other two groups. In general, girls tended to score above boys, and white pupils above Negro pupils of the same sex.

Findings from a special substudy, utilizing previously validated experimental measures of achievement motivation, suggest a greater impact of desegregated schooling on the achievement motivation of Negro boys than Negro girls. Over the posttransfer year, Negro boys in the transfer group showed a significantly greater increase in autonomous achievement motivation than did nontransfer boys. A parallel trend was apparent for social comparison achievement motivation, indicating a reduced tendency of older Negro boys (grades 2-5) to overaspire -- i.e., to set unrealistically high goals. Overaspiration was found to be associated with membership in a salient racial minority group in school (Negro or white); for pupils of low to moderate socioeconomic status, it is also associated with attending a school in which regular contact with children of higher socioeconomic status is not possible.

The last measure examined in this chapter, expressed occupational preference, was investigated as a possible index of personal aspiration. Generally, the receiving-school pupils expressed initial preferences for occupations of higher status than those expressed by transfer and nontransfer pupils. In the posttransfer year, the highest mean scores consistently occurred in the receiving-school group, the lowest in the transfer group. These differences, which were substantial by the end of the posttransfer year, were not statistically significant, owing to the tremendous variability of choice within groups. Wide fluctuations in the status-level of choices expressed on different occasions marked the measure as an unreliable one in this age group, and it was not considered further.

Chapter 8

INTERPERSONAL RELATIONSHIPS

Interpersonal relationships were assessed sociometrically and via two self-report measures dealing with the child's perceptions of his schoolmates and teachers and the nature of his interactions with them.

1. Sociometric Measures

The Social Distance Scale was administered to pupils at all grade levels. During the pretransfer year, only the transfer and nontransfer groups were tested with this instrument. The social context of the receiving schools became relevant with the entry of the transfer pupils, and receiving-school classmates of these pupils were included in the two subsequent assessments.

Five variables were derived from the Social Distance measure. The critical variable, acceptance by peers, was obtained as follows. Classmates' responses to the child, indicated on a 4-point scale (like a lot, some, a little, or very little), were summed and then divided by the maximum score possible (4 times the number of classmates responding); the result was expressed as a percent. Total acceptance scores thus have a possible range of 25 (a rating of 1 -- "like very little" -- by all classmates) to 100 (a rating of 4 -- "like a lot" -- by all classmates).

A similar procedure was followed in obtaining scores for acceptance by peers of the same sex, and of the opposite sex. Not surprisingly, these scores correlate highly with the total acceptance score. Coefficients for same sex, for the three assessment periods, are .79, .79, and .85, respectively; those for opposite sex are .86, .84, and .88.

Two other variables were extracted from the Social Distance measure, both of them exploratory. One, acceptance of peers, might be viewed as a relative measure of the child's overall positive affect toward children in his class. This variable was obtained by summing the child's responses to his classmates and following the procedure described above to arrive at a percentage score. Theoretical maximum and minimum scores for this measure are the same as those for the previous sociometric measures, although the validity of a maximum or minimum score here (i.e., like all classmates a lot, like them all very little) would need to be questioned.

The last sociometric variable to be examined was the child's own rating, on the same 4-point scale, of himself as he believes he is viewed by his classmates (self-perceived acceptance). Early analyses showed little variance in responses, similar group means, and little change over time in this measure; it was subsequently dropped.

Acceptance by Peers

Pretransfer total acceptance scores for the transfer and nontransfer groups appear in Table 8-1. Mean acceptance scores are similar for the populations as a whole except at grades K-1, where the overall level of acceptance of transfer pupils by their classmates is significantly (though not greatly) below that in the nontransfer group. This pattern holds for most of the race-sex subgroups as well, although the differences there are not significant. Exceptions, showing greater acceptance in the transfer group, occur among white and Negro boys in grades 4-5 and Negro girls in grades 2-3. The latter two differences are statistically significant.

Racial differences in acceptance by peers are apparent in the nontransfer group, where the white child is the preferred classmate, on the whole, except among boys in grades 2-3 and 4-5, whose mean acceptance scores are comparable in the two racial groups. In the transfer group, means for Negro and white boys show little difference at any grade level, and the same is true for Negro and white girls in grades 4-5. In grades K-1, white transfer girls appear to be more generally accepted than Negro girls, while the reverse is true in grades 2-3. These observations concerning Negro-white acceptance in the transfer group should not be overinterpreted. Given the small number of white pupils per class in the *de facto* segregated school, their mean acceptance scores are probably influenced to a much greater extent by reactions to specific white children than by the attitudes of this population toward white children in general.

Table 8-1. ACCEPTANCE BY PEERS (Total): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	66.2	11.4	6	67.7	9.0	27	79.5	16.2	4	68.1	15.5	26	68.5	12.8	63
NT	75.8	11.2	41	66.0	14.3	27	80.9	9.4	38	68.8	12.2	39	73.4	12.9	145
	F= 3.824			F= 0.285			F= 0.074			F= 0.047			F= 6.553*		
2-3: T	66.5	10.0	4	65.8	10.2	22	67.5	25.3	4	73.4	11.9	26	69.5	12.6	56
NT	69.9	11.4	31	67.7	8.5	28	75.6	8.2	34	63.2	8.7	39	68.9	10.3	132
	F= 0.331			F= 0.519			F= 2.047			F=15.865**			F= 0.096		
4-5: T	71.7	12.3	6	74.3	9.7	18	63.0	9.3	4	61.9	12.3	12	69.1	12.0	40
NT	66.3	10.4	34	66.9	10.4	34	73.8	13.9	34	63.6	10.7	28	67.8	11.9	130
	F= 1.315			F= 6.339*			F= 2.239			F= 0.193			F= 0.340		

No consistent pattern of sex differences is seen across grades in either the transfer or nontransfer group. In grades K-1, however, the means for girls in both groups are consistently higher than means for boys, and this is generally true in grades 2-3 as well, except for the Negro nontransfer pupils. In grades 4-5, higher means are found for boys, with the exception of the white nontransfer pupils.

Posttransfer total acceptance scores are reported in Table 8-2. Here, mean acceptance scores for the transfer population are uniformly lower than those for the nontransfer and receiving-school groups. For grades K-1, the differences are significant for both posttransfer measures. For grades 2-3, the difference is significant for the first posttransfer measure but not the second; for grades 4-5, the difference is significant for the second posttransfer measure only.

A negligible decrement (about two points) is seen to occur in the nontransfer group from the pretransfer measure to the fall posttransfer measure. Mean decrements in the transfer group over that period range from 5 points in grades K-1 to 8 or 9 points at the higher grade levels. Peer status appears to have been relatively unaffected thereafter. A small further decrement is seen for both groups in grades K-1, and a slight increment for the transfer group in grades 2-3, but in general the fall and spring posttransfer means are similar in all three populations.

When race and sex are taken into account, significant differences among the three groups occur for white girls at all grade levels, excluding the fall posttransfer measure for grades 4-5, and for white boys in grades K-1. No significant differences occur in the Negro subgroups. In general, however, the mean acceptance scores of both white and Negro transfer pupils fall below those of the nontransfer pupils, with a few exceptions primarily among the boys. In almost half the cells, however, means are slightly higher for the transfer group than for receiving-school pupils, and in nearly every instance this difference occurs in Negro subgroups. While differences are generally small between Negro transfer and Negro receiving-school pupils, 8 of the 12 comparisons involving those two groups show the transfer pupils to have the higher mean. Thus, although Negro transfer pupils appear to have been somewhat less well accepted by their receiving-school classmates than by their peer group in the *de facto* segregated school, they seem to have been accepted at least as well, on the whole, as Negro children living in the receiving-school neighborhoods. For white transfer pupils, on the other hand, mean acceptance scores are somewhat lower, as a rule, than those of white neighborhood children.

Within populations, racial differences in peer acceptance tend to bear out the pretransfer findings. In the nontransfer group, with a single exception -- and in the receiving schools without exception -- the means for white children at every grade level exceed the means for Negro children of the same sex. In the transfer group, on the other hand, no consistent pattern is seen; where differences of any magnitude occur, they favor white and Negro pupils about equally.

Sex differences in posttransfer acceptance do not consistently reflect the grade-related trends noted in the pretransfer data. Sex differences are somewhat more evident among white pupils, overall, than among Negroes. Among the white subgroups, mean differences favor girls over boys in a substantial majority of cases, while the differences which do occur among Negro subgroups favor boys and girls about equally. Within populations, sex differences are least apparent in the receiving-school group and generally show higher mean acceptance scores for girls. Sex differences in the nontransfer group likewise tend to favor girls, while in the transfer group the differences favor boys and girls about equally.

The analysis of pre- to posttransfer changes in peer acceptance is reported in Table 8-3. Included in this analysis are the transfer and nontransfer pupils who were tested on all three occasions. Receiving-school pupils are not represented, inasmuch as pretransfer sociometric measures were not obtained for them.

Significant changes are relatively few and scattered, with most of them occurring over the one-year period from the pretransfer measure to the second posttransfer measure. They occur with equal frequency in the transfer and nontransfer groups, and all represent decrements from the pretransfer level of acceptance. Significant decrements in the nontransfer group are seen in pupils of both races; in the transfer group, they are limited to Negro pupils.

Irrespective of the statistical significance of the observed changes, it is noteworthy that in both the transfer and nontransfer groups, all changes reflected in the first

Table 8-2. ACCEPTANCE BY PEERS (Total): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
Posttransfer 1 (Fall)															
K-1: T	61.8	14.6	5	63.1	7.1	19	76.0	0.0	1	62.5	10.5	20	63.0	9.6	45
NT	75.5	10.2	37	61.4	12.2	19	78.8	10.3	31	65.8	10.5	29	71.7	12.4	116
R	70.9	9.1	288	69.3	8.5	9	73.0	10.3	274	59.8	8.6	8	71.7	9.8	579
	F= 6.679**			F= 2.058			F= 8.962**			F= 1.346			F=15.279**		
2-3: T	63.7	19.8	3	58.5	7.9	17	62.0	0.0	1	61.6	7.8	23	60.5	8.7	44
NT	66.0	12.2	28	63.6	9.8	21	74.1	10.9	34	62.7	9.6	35	66.9	11.5	118
R	66.6	10.2	289	56.8	15.9	6	69.4	8.9	277	55.0	4.7	7	67.7	9.9	579
	F= 0.149			F= 1.733			F= 8.111**			F= 2.332			F=10.331**		
4-5: T	62.8	16.7	5	63.5	8.2	16	60.3	4.5	3	58.0	5.9	10	61.5	9.0	34
NT	65.1	9.7	35	63.5	10.2	28	70.4	13.6	34	60.6	9.8	24	65.3	11.5	121
R	64.2	10.6	216	61.7	3.8	3	66.3	9.6	239	60.7	10.3	6	65.2	10.1	464
	F= 0.161			F= 0.054			F= 2.972			F= 0.313			F= 2.106		

(table continued below)

Table 8-2 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	55.0	7.4	4	64.5	10.1	15	60.5	12.0	2	60.8	9.8	19	61.6	9.9	40
NT	70.7	15.4	35	60.6	13.3	19	75.9	10.6	34	62.3	11.6	27	68.6	14.1	115
R	68.5	11.5	278	62.6	11.3	12	71.0	12.9	267	62.5	13.5	8	69.4	12.3	565
		F= 3.133*			F= 0.469			F= 3.070*			F= 0.121			F= 7.424**	
2-3: T	66.0	16.7	3	61.1	14.1	14	48.5	16.3	2	64.4	12.7	22	62.6	13.5	41
NT	64.8	15.1	28	63.4	8.4	20	71.8	10.5	35	63.6	8.3	32	66.3	11.4	115
R	66.4	12.2	285	57.3	14.5	9	67.3	11.2	271	63.3	12.8	10	66.7	11.8	575
		F= 0.216			F= 0.804			F= 5.514**			F= 0.047			F= 2.226	
4-5: T	70.0	19.2	5	64.6	9.4	16	53.7	5.5	3	56.9	8.6	10	62.1	11.6	34
NT	63.7	9.6	34	65.4	9.5	25	71.9	11.2	30	59.9	9.9	23	65.5	10.9	112
R	66.8	13.1	216	60.8	10.0	6	67.8	11.6	234	58.3	15.4	7	67.1	12.4	463
		F= 1.068			F= 0.565			F= 4.118*			F= 0.279			F= 3.119*	

Table 8-3. CHANGE IN ACCEPTANCE BY PEERS (Total): PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
						Pretransfer to Posttransfer 1 (Fall)						
K-1: T	- 3.2	11.5	4	- 3.9	10.3	14	- 1.0	0.0	1	- 5.2	12.7	19
NT	- 1.7	7.1	29	- 2.2	11.4	18	- 0.9	8.6	29	- 2.0	10.6	26
2-3: T	- 5.3	15.3	3	- 5.7	12.6	15	-22.0	0.0	1	-13.5**	8.3	22
NT	- 2.0	7.8	25	- 4.4	10.8	18	0.0	8.1	30	- 0.3	9.0	28
4-5: T	- 6.2	8.3	5	-11.4**	11.6	16	- 4.0	14.1	2	- 6.4	12.0	10
NT	- 1.2	6.0	30	- 2.5	5.9	24	- 1.9	6.3	29	- 1.1	5.6	21
						Posttransfer 1 to Posttransfer 2 (Spring)						
K-1: T	- 3.2	9.8	4	+ 0.9	7.2	14	-24.0	0.0	1	- 2.2	8.8	19
NT	- 3.4	9.7	29	- 1.4	7.5	18	- 4.4	11.4	29	- 4.1*	8.2	26
2-3: T	+ 2.3	3.1	3	+ 2.3	13.1	15	- 2.0	0.0	1	+ 2.4	8.2	22
NT	- 0.9	8.0	25	+ 0.1	6.9	18	- 1.8	9.6	30	+ 0.6	9.7	28
4-5: T	+ 7.2	9.3	5	+ 1.1	8.8	16	- 2.5	3.5	2	- 1.1	6.7	10
NT	- 1.5	8.1	30	+ 1.2	7.1	24	- 0.7	6.8	29	- 0.9	7.6	21

(table continued below)

Table 8-3 (continued)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 2 (Spring)					
K-1: T	- 6.5	13.7	4	- 3.0	13.4	14	-25.0	0.0	1	- 7.4*	11.7	19
NT	- 5.1*	11.0	29	- 3.6	10.7	18	- 5.3**	9.1	29	- 6.1*	11.8	26
2-3: T	- 3.0	12.8	3	- 3.5	12.6	15	-24.0	0.0	1	-11.1**	9.2	22
NT	- 2.9	11.2	25	- 4.4	9.7	18	- 1.8	8.1	30	+ 0.3	7.8	28
4-5: T	+ 1.0	7.7	5	-10.4**	9.5	16	- 6.5	17.7	2	- 7.5	10.8	10
NT	- 2.7	7.7	30	- 1.2	8.4	24	- 2.6	9.0	29	- 2.0	8.6	21

posttransfer measure are negative. Consistent with the analysis of group means for the fall measure, the larger decrements occur uniformly in the transfer group.

From fall to spring of the posttransfer year, the downward trend is seen to continue for grades K-1, except for Negro boys in the transfer group, who show essentially no change for this period. Mean decrements for the transfer group here, however, are smaller on the whole than those for the nontransfer group. In grades 2-3, the transfer group is seen to stabilize over this period, with gains averaging about 2 points evident in all subgroups except white girls (*n* = 1). Nontransfer pupils in grades 2-3, and in grades 4-5, show little or no change between the two posttransfer measures. Changes in the transfer group for grades 4-5 tend to be positive for boys and negative for girls, although the only mean change of any magnitude occurs in the small group of white boys.

Net changes in peer acceptance for the year as a whole are positive in only two cells, both representing negligible differences. Within the race-sex subgroups, excluding those with only one or two pupils per cell, net changes for the transfer and nontransfer groups are of similar magnitude, with three exceptions. The exceptions, all showing substantially larger decrements in the transfer group, occur among Negro girls in grades 2-3 and Negro boys and girls in grades 4-5. The decrement for the last subgroup is not statistically significant; decrements for the other two are, and those two subgroups -- Negro girls in grades 2-3, Negro boys in grades 4-5 -- are the only ones of reasonable size showing decrements as large as 10 points. They are the only two subgroups, likewise, whose pretransfer acceptance scores were significantly higher than those of their nontransfer counterparts; the effect of the decrement, as can be seen in Table *8-2*, is to eliminate those initial differences.

It is noteworthy that while the transfer pupils showed a greater initial loss in peer status upon entering the receiving schools, their net changes over the posttransfer year were little different -- with the exceptions noted -- than net changes for nontransfer pupils of the same race, sex, and grade. This general finding, and others reported in this section, point up the importance of appropriate controls in research of this kind. Without discounting the importance of the exceptions, it seems clear that somewhat different and more ominous inferences might be drawn from examination of the transfer-group data alone.

Acceptance by Peers (Same-Sex and Opposite-Sex)

In view of the high correlations between total acceptance and acceptance by same-sex and opposite-sex peers (p. 167), the data for the latter two measures will not be considered in great detail. Only the pre- and posttransfer data are presented (Tables 8-4, 8-5, 8-6, and 8-7).

Predictably, in this age group, mean acceptance scores are substantially higher for same-sex peers than for opposite-sex peers. Boys are preferred by boys, and girls by girls. This is consistently true for both pre- and posttransfer data, for pupils of both races, and at every grade level.

For the populations as a whole, the posttransfer data for both measures uniformly show somewhat lower acceptance scores in the transfer group. This is not consistently the case for the pretransfer year. As with the total acceptance scores, means for both measures here decrease from the pretransfer to the first posttransfer assessment, in both the transfer and nontransfer groups. Decrements in the transfer group are consistently larger for same-sex acceptance, and somewhat larger for opposite-sex acceptance (except at grades K-1), relative to decrements in the nontransfer group. The same holds true for the year as a whole. Decrements in same-sex acceptance tend to be smaller in both groups than decrements in opposite-sex acceptance, over the one-year period.

In the transfer group, neither measure shows a consistent pattern of preference for white or Negro classmates, in either the pretransfer or posttransfer data. In the nontransfer group, the pretransfer data show white pupils to be generally better accepted than Negro pupils by both same-sex and opposite-sex peers, except for boys in grades 4-5, where the acceptance scores of the two racial groups are comparable. Posttransfer data reflect the same pattern for nontransfer girls, and for boys in grades K-1. For nontransfer boys in grades 2-3 and 4-5, there is little difference between the means of white and Negro pupils other than in acceptance by opposite-sex peers on the first posttransfer measure. There, white boys were preferred in both grade groups. In the receiving-school group, white pupils were uniformly preferred by their opposite-sex classmates, and with the exception of one or two cells, this holds true for same-sex classmates as well.

Comparisons of transfer pupils with their receiving-school classmates reveal both race- and sex-related differences in acceptance by same-sex and opposite-sex peers.

Table 8-4. ACCEPTANCE BY PEERS (Same Sex): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	74.5	12.4	6	75.5	12.5	27	89.2	16.1	4	77.6	17.9	26	77.2	15.2	63
NT	84.2	12.0	41	74.0	17.1	27	83.4	10.8	38	71.5	13.9	39	78.7	14.4	145
		F= 3.352			F= 0.145			F= 0.982			F= 2.373			F= 0.468	
2-3: T	79.8	25.3	4	76.7	15.2	22	72.8	29.4	4	81.4	12.0	26	78.8	15.6	56
NT	84.9	11.7	31	83.4	10.7	28	86.3	10.3	34	72.7	11.4	39	81.3	12.3	132
		F= 0.508			F= 3.355			F= 3.916			F= 8.790**			F= 1.387	
4-5: T	82.8	12.5	6	89.1	10.6	18	86.5	10.0	4	79.7	15.5	12	85.1	12.7	40
NT	79.8	10.5	34	80.0	10.6	34	83.2	13.1	34	76.1	13.5	28	79.9	12.1	130
		F= 0.412			F= 8.680**			F= 0.238			F= 0.525			F= 5.422*	

White boys in the transfer group were generally less well accepted than white receiving-school boys -- by other boys in the class and by girls as well in grades K-1, but not consistently elsewhere. White girls in the transfer group differed little from receiving-school white girls in same-sex acceptance but were much less popular with boys in the class than were white neighborhood girls. Negro transfer boys were generally better liked than Negro boys in the receiving-school group, by other boys and particularly by girls in their classes. Negro girls in the two groups did not, on the whole, differ greatly in acceptance by either boys or girls. Differences occurring in the same-sex measure did not consistently favor either transfer or receiving-school girls. Negro transfer girls in grades K-1 and 2-3 showed a slight initial advantage in acceptance by boys in their classes, but the advantage was not maintained in the final posttransfer measure.

Acceptance of Peers

Pretransfer data for the acceptance of peers are presented in Table 8-8. The transfer and nontransfer populations show similar values for this measure except at grades K-1, where the transfer group mean is significantly below that of the nontransfer group. This difference is seen to result from the differential reactions of Negro pupils in the two groups -- the atypically high regard expressed by Negro nontransfer boys for their classmates, and the considerably less positive feeling of Negro boys and girls in the transfer group toward their school peers.

Apart from the significant difference between Negro transfer and nontransfer boys in grades K-1, differences within the race-sex subgroups are uniformly small (4 points, at most). Neither sex nor race as such shows a consistent relationship to mean acceptance scores. It is perhaps worth noting, however, that the means are slightly lower for Negro transfer pupils than for Negroes in the nontransfer group, except among girls in grades 2-3. Among white pupils, with the same exception, the reverse is true: white transfer pupils are slightly more accepting of their classmates than white nontransfer pupils.

Posttransfer data for this measure appear in Table 8-9. Only one significant difference is found: in the first posttransfer measure for grades 4-5, transfer pupils as a group express more positive feelings toward classmates than pupils

Table 8-5. ACCEPTANCE BY PEERS (Same Sex): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	64.2	20.7	5	67.7	10.2	19	86.0	0.0	1	71.2	11.3	20	69.3	12.2	45
NT	84.1	11.4	37	69.5	15.1	19	83.8	12.8	31	73.6	12.5	29	79.0	13.9	116
R	78.3	11.2	288	81.8	9.4	9	81.3	11.8	274	70.8	11.7	8	79.7	11.6	579
	F= 8.344**			F= 4.246*			F= 1.195			F= 0.300			F=15.536**		
2-3: T	70.3	13.1	3	66.2	11.1	17	82.0	0.0	1	75.0	11.1	23	71.4	11.7	44
NT	79.6	15.1	28	81.0	12.5	21	83.8	10.4	34	71.9	12.0	35	78.8	13.2	118
R	77.1	11.9	289	62.8	19.7	6	82.9	10.3	276	66.3	10.7	7	79.6	11.8	578
	F= 1.050			F= 7.946**			F= 0.227			F= 1.594			F= 9.419**		
4-5: T	78.0	16.8	5	78.2	11.9	16	80.0	4.4	3	72.9	10.0	10	76.8	11.6	34
NT	78.9	12.7	35	78.2	12.9	28	81.5	12.6	34	74.9	12.9	24	78.7	12.8	121
R	79.0	12.5	216	75.3	5.0	3	81.8	11.9	239	81.5	6.6	6	80.1	12.2	464
	F= 0.016			F= 0.076			F= 0.028			F= 1.098			F= 1.579		

(table continued below)

Table 8-5 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	64.0	12.8	4	72.9	17.9	15	76.0	33.9	2	71.2	12.5	19	71.4	15.4	40
NT	80.1	14.7	35	68.7	13.5	19	82.4	11.8	34	72.0	13.2	27	77.0	14.2	115
R	76.7	13.2	278	72.7	13.7	12	80.2	13.8	267	70.5	15.4	8	78.2	13.7	565
	F= 2.872			F= 0.406			F= 0.499			F= 0.045			F= 4.666**		
2-3: T	76.7	18.6	3	71.9	14.0	14	62.0	29.7	2	77.0	14.5	22	74.5	15.1	41
NT	82.1	17.4	28	80.5	11.5	20	79.1	13.0	35	73.2	10.7	32	78.4	13.7	115
R	76.9	14.0	285	61.0	17.9	9	79.6	12.6	271	76.2	17.4	10	77.9	13.7	575
	F= 1.724			F= 6.362**			F= 1.884			F= 0.605			F= 1.316		
4-5: T	80.8	13.9	5	78.9	14.0	16	69.0	5.6	3	71.3	16.0	10	76.1	14.3	34
NT	74.4	11.0	34	77.0	11.2	25	86.0	10.7	30	74.2	15.7	23	78.0	12.9	112
R	77.3	13.6	216	73.7	13.6	6	78.5	12.7	234	73.4	14.8	7	77.8	13.2	463
	F= 0.916			F= 0.386			F= 5.729**			F= 0.121			F= 0.308		

④

Table 8-6. ACCEPTANCE BY PEERS (Opposite Sex): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	58.2	14.7	6	59.7	9.6	27	72.2	19.5	4	61.1	16.9	26	60.9	14.1	63
NT	69.2	13.3	41	59.8	14.8	27	78.7	11.9	38	66.5	13.9	39	69.2	14.8	145
	F= 3.533			F= 0.002			F= 0.942			F= 1.981			F=14.263**		
2-3: T	58.8	16.0	4	58.9	11.4	22	61.5	22.1	4	64.7	16.1	26	61.8	14.7	56
NT	59.0	13.6	31	54.7	10.0	28	64.0	9.8	34	52.9	9.1	39	57.6	11.4	132
	F= 0.001			F= 1.936			F= 0.177			F=14.204**			F= 4.435*		
4-5: T	59.2	14.6	6	57.2	10.9	18	46.2	11.5	4	49.4	15.8	12	54.1	13.5	40
NT	53.1	13.2	34	53.3	13.4	34	65.8	16.3	34	53.4	13.0	28	56.5	15.0	130
	F= 1.066			F= 1.126			F= 5.373*			F= 0.706			F= 0.863		

in the nontransfer and receiving-school groups. This same pattern is demonstrated in all other comparisons involving the total groups, except the first posttransfer measure in grades K-1, and it is apparent within many of the race-sex subgroups. It is seen to be the result, primarily, of an overall decrement in mean scores for nontransfer pupils over the posttransfer year, enhanced in some instances by a slight upward shift in the means of transfer pupils.

As in the pretransfer data, race and sex _per se_ show no systematic relationship to expressed liking for peers. Negro boys, however, quite consistently express the strongest positive feelings for their classmates. Within populations and grades, the means for Negro boys are uniformly higher than those for white girls, higher in 17 of 18 comparisons with white boys, and higher in 15 of 18 comparisons with Negro girls. With a few exceptions, white girls tend to have higher means than white boys, but they show no consistent pattern of differences relative to Negro girls.

Changes in acceptance scores over the posttransfer year are shown in table _8-10_. Few are significant; those which are reflect decrements rather than gains and, with one exception, occur in the nontransfer group. Among Negro transfer pupils, consistent increments over the pretransfer values are found in the fall posttransfer measure, with the exception of girls in grades 2-3. These increments are reduced, between fall and spring, by small decrements in all subgroups but the K-1 boys. Net changes from the pretransfer value are nonetheless positive for Negro transfer boys at all grade levels, but Negro girls in the transfer group show essentially no change (grades K-1) or a slight decrement overall. Among the small number of white transfer pupils, the general picture for grades K-1 and 2-3 is one of decrements appearing in the fall posttransfer measure and being compensated between fall and spring. For grades 4-5, the pattern is reversed for boys, and girls show increments over both periods. Net changes for the year as a whole are positive, except for the one white girl in grades 2-3, but in some cases negligible. By and large, then, Negro transfer pupils tended to respond initially to their receiving-school classmates with somewhat more positive feelings than they expressed the previous year for their peers in the _de facto_ segregated school. This initial response tended to diminish thereafter among all but the K-1 boys, and to disappear among girls. White transfer pupils in grades 4-5 showed a similar initial response, which subsequently diminished in boys (_n_ = 5) but was maintained in girls (_n_ = 2) over the year. The younger

Table 8-7. ACCEPTANCE BY PEERS (Opposite Sex): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	57.2	11.3	5	58.0	10.2	19	66.0	0.0	1	54.7	11.9	20	56.6	10.9	45
NT	68.2	11.5	37	54.6	12.3	19	74.1	11.7	31	58.6	12.7	29	65.2	13.9	116
R	63.8	11.2	288	59.2	12.1	9	65.5	12.4	274	50.8	10.5	8	64.3	11.9	579
	F= 3.520*			F= 0.647			F=13.784**			F= 1.510			F= 8.992**		
2-3: T	58.3	24.1	3	51.8	7.1	17	51.0	0.0	1	48.9	8.7	23	50.7	9.5	44
NT	56.8	14.3	28	51.6	13.2	21	62.3	14.0	34	51.0	11.3	35	55.7	13.9	118
R	56.0	12.2	289	52.7	16.0	6	57.0	10.7	277	43.1	7.2	7	56.3	11.6	579
	F= 0.097			F= 0.020			F= 6.972**			F= 1.793			F= 4.561*		
4-5: T	46.6	17.0	5	51.9	8.2	16	40.0	3.5	3	41.8	5.6	10	47.1	10.0	34
NT	51.0	9.5	35	48.1	10.8	28	59.1	16.5	34	47.2	11.1	24	51.9	13.2	121
R	51.1	11.2	216	39.0	6.6	3	51.7	11.5	239	42.2	13.0	6	51.2	11.4	464
	F= 0.406			F= 2.378			F= 7.118**			F= 1.248			F= 2.258		

(table continued below)

Table 8-7 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	47.5	1.0	4	55.5	7.2	15	53.0	1.4	2	51.5	9.9	19	52.7	8.4	40
NT	62.9	19.5	35	53.7	15.8	19	69.4	12.9	34	52.4	13.1	27	60.9	17.0	115
R	61.1	13.8	278	54.3	11.4	12	62.3	15.0	267	55.0	13.9	8	61.4	14.4	565
	F= 2.048			F= 0.094			F= 4.050*			F= 0.236			F= 6.739**		
2-3: T	55.0	12.3	3	52.8	14.9	14	40.5	7.8	2	52.4	13.3	22	52.1	13.5	41
NT	53.8	16.1	28	52.2	10.9	20	61.8	12.9	35	51.4	9.1	32	55.3	13.1	115
R	56.7	13.3	285	54.0	15.9	9	55.7	13.2	271	50.2	12.2	10	56.1	13.3	575
	F= 0.583			F= 0.060			F= 4.788**			F= 0.133			F= 1.764		
4-5: T	58.4	23.0	5	52.8	13.7	16	40.0	8.7	3	43.4	8.5	10	49.7	14.5	34
NT	51.1	11.0	34	51.7	14.0	25	58.1	16.0	30	45.4	11.3	23	51.9	13.8	112
R	57.4	14.7	216	46.0	10.9	6	57.2	13.5	234	44.6	15.8	7	56.9	14.2	463
	F= 2.809			F= 0.569			F= 2.388			F= 0.109			F= 8.720**		

Table 8-8. ACCEPTANCE OF PEERS: PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	72.5	7.6	6	69.7	11.3	26	74.2	21.3	4	67.8	12.6	26	69.5	12.2	62
NT	71.3	11.1	41	81.7	12.9	27	71.4	11.6	38	71.8	10.8	39	73.4	12.1	145
	F= 0.060			F=12.922**			F= 0.183			F= 1.834			F= 4.622*		
2-3: T	70.0	5.9	4	69.4	14.4	21	67.0	10.2	4	71.2	10.8	26	70.1	11.8	55
NT	66.3	11.1	31	72.2	10.9	28	68.7	11.4	34	68.9	9.4	38	69.0	10.7	131
	F= 0.415			F= 0.596			F= 0.085			F= 0.795			F= 0.430		
4-5: T	66.3	9.9	6	72.8	12.4	18	68.2	9.0	4	65.5	12.3	12	69.2	11.9	40
NT	65.3	11.1	34	74.6	10.7	34	65.6	11.0	34	66.1	11.9	28	68.0	11.7	130
	F= 0.043			F= 0.272			F= 0.216			F= 0.019			F= 0.336		

white transfer pupils, on the other hand, showed less favorable initial response which became increasingly more positive over the posttransfer year.

In the nontransfer group, white pupils generally showed somewhat diminished positive responses to their classmates in both the fall and spring posttransfer measures, with overall decrements ranging from about 2 to 6 points below pretransfer values. Negro nontransfer pupils similarly showed small decrements in the fall measure, except for girls in grades 2-3, but a variable picture for the subsequent spring measure. Net changes for the year as a whole in these Negro pupils were negative in grades K-1 and positive (though slight) for girls in grades 2-3 and 4-5; boys in those grades showed essentially no net change from the pretransfer level.

It is beyond the scope of this report to speculate about patterns of response in the nontransfer group. It should perhaps be pointed out, however, that during the posttransfer year there was much debate in the community about projected plans for intervention in the nontransfer school, to stem the increasing Negro enrollment. Conceivably, that general climate could have influenced the attitudes of the nontransfer pupils toward their school peers. In any case, the response of the transfer pupils to their new peer group appears to have been at least as positive, and perhaps more so, than the response of nontransfer pupils to their classmates during the same period.

3. Self-Report Measures

Two scales from the School Attitudes Card Sort, administered in grades 2-5, provide self-report measures of interpersonal relationships. One scale, Peer Relationships, consists of 4 items to which the child responds on a 4-point scale (maximum score 16), indicating that the statement is true for him most of the time, sometimes, hardly ever, or never. The items reflect the child's perceptions of his classmates and of his relationships with them (e.g., "The kids in class include everybody in what they do," "The kids in school are my very good friends").

The second scale, Negative Interpersonal Relationships, contains 6 items of the same format. Three deal with peer relationships (e.g., "The kids in class try to boss me around too much"); the other three focus on teacher-pupil relationships (e.g., "Teachers don't understand kids very well").

Table 8-9. ACCEPTANCE OF PEERS: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	64.8	15.2	5	70.9	11.3	19	44.0	0.0	1	71.8	10.6	20	70.0	11.9	45
NT	70.5	11.9	37	74.7	11.8	19	71.5	10.5	32	71.2	12.2	29	71.6	11.5	117
R	70.6	11.3	289	77.1	9.7	10	71.8	11.2	275	64.4	17.5	8	71.2	11.4	582
		F= 0.635			F= 1.123			F= 0.032			F= 1.119			F= 0.294	
2-3: T	71.0	10.8	3	77.8	11.0	17	60.0	0.0	1	69.2	12.6	23	72.4	12.4	44
NT	64.1	9.2	28	67.0	14.1	21	65.0	13.3	34	70.0	10.9	35	66.6	12.0	118
R	64.8	13.1	288	76.0	17.8	7	68.5	11.1	278	74.1	12.9	7	66.8	12.4	580
		F= 0.395			F= 3.175			F= 2.847			F= 0.489			F= 4.267*	
4-5: T	69.0	14.9	5	76.4	12.6	16	68.0	9.2	3	66.3	13.1	10	71.6	13.2	34
NT	62.2	11.2	35	72.1	9.5	28	64.1	10.3	34	64.2	13.6	24	65.4	11.6	121
R	62.9	12.0	214	72.0	14.7	3	65.9	9.4	237	64.8	10.8	6	64.5	10.8	460
		F= 0.717			F= 0.852			F= 0.609			F= 0.089			F= 6.488**	

(table continued below)

Table 8-9 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	73.2	6.8	4	75.5	14.4	15	73.5	10.6	2	68.1	12.2	19	71.6	12.7	40
NT	64.3	10.3	35	70.0	10.2	19	68.1	10.0	33	68.1	8.4	27	67.3	9.8	114
R	68.1	11.1	276	72.4	13.2	12	69.6	10.0	267	68.2	7.9	8	68.9	10.6	563
	F= 2.351			F= 0.807			F= 0.475			F= 0.001			F= 2.646		
2-3: T	72.7	2.5	3	71.4	12.9	13	47.5	12.0	2	68.5	15.5	22	68.7	14.5	40
NT	61.0	11.1	28	72.8	10.6	20	62.5	9.6	35	70.4	10.7	32	66.1	11.4	115
R	64.9	13.1	282	70.9	13.3	9	67.3	11.2	271	72.6	14.9	10	66.3	12.3	572
	F= 1.747			F= 0.095			F= 5.924**			F= 0.359			F= 0.749		
4-5: T	66.8	13.3	5	73.8	12.7	16	73.3	11.7	3	63.0	14.8	10	69.6	13.7	34
NT	61.0	12.2	34	72.2	13.2	25	64.5	10.5	30	67.4	11.2	23	65.7	12.4	112
R	65.0	11.6	215	72.8	7.3	5	67.8	11.1	230	67.4	9.8	7	66.5	11.3	457
	F= 1.846			F= 0.080			F= 1.616			F= 0.513			F= 1.398		

Table 8-10. CHANGE IN ACCEPTANCE OF PEERS: PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)					
K-1: T	-10.0	11.9	4	+ 5.1	13.1	14	- 6.0	0.0	1	+ 3.9	15.9	19
NT	- 3.2	11.8	29	- 3.7	16.9	18	- 0.5	11.3	28	- 0.8	15.0	26
2-3: T	- 1.0	8.9	3	+ 8.5	17.7	13	-13.0	0.0	1	- 2.1	12.2	22
NT	- 2.1	11.3	25	- 5.5	16.3	18	- 3.8	10.5	30	+ 1.7	11.2	27
4-5: T	+ 2.4	8.9	5	+ 4.5	17.9	16	+ 2.5	12.0	2	+ 2.3	9.8	10
NT	- 4.3*	10.4	30	- 0.8	9.3	24	- 1.8	8.8	29	- 0.7	8.2	21
							Posttransfer 1 to Posttransfer 2 (Spring)					
K-1: T	+12.0	14.7	4	+ 2.0	13.7	14	+22.0	0.0	1	- 3.5	10.4	19
NT	- 2.9	9.4	29	- 6.3	12.5	18	- 3.2	8.5	28	- 2.4	13.5	26
2-3: T	+ 1.7	10.7	3	- 5.4*	7.8	13	- 4.0	0.0	1	- 0.4	16.2	22
NT	- 2.4	8.8	25	+ 5.5	17.2	18	- 2.7	8.6	30	0.0	11.0	27
4-5: T	- 2.2	14.1	5	- 2.6	13.6	16	+ 5.5	14.8	2	- 3.3	23.7	10
NT	- 0.7	8.9	30	+ 0.3	12.4	24	+ 0.3	9.0	29	+ 2.2	8.8	21

(table continued below)

Table 8-10 (continued)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
				Pretransfer to Posttransfer 2 (Spring)								
K-1: T	+ 2.0	4.2	4	+ 7.1	15.2	14	+16.0	0.0	1	+ 0.4	16.9	19
NT	- 6.1*	11.9	29	-10.1**	12.6	18	- 3.8	10.3	28	- 3.2	10.5	26
2-3: T	+ 0.7	3.2	3	+ 3.1	16.7	13	-17.0	0.0	1	- 2.5	22.5	22
NT	- 4.5*	9.6	25	0.0	13.1	18	- 6.4**	11.3	30	+ 1.7	12.0	27
4-5: T	+ 0.2	12.7	5	+ 1.9	17.0	16	+ 8.0	2.8	2	- 1.0	22.6	10
NT	- 5.0**	9.0	30	- 0.5	13.5	24	- 1.5	10.9	29	+ 1.5	10.4	21

The two scales are moderately correlated (r = .45, .51, and .54, respectively, for the three assessment periods) but retain considerable independent variance.

Peer Relationships

Pretransfer data for the Peer Relationships scale are shown in Table 8-11. In both grade groups, the least positive relationships with peers are reported by the transfer population and the most positive by receiving-school pupils, with the nontransfer group falling somewhere between. In both cases, the differences are statistically significant.

Several of the race-sex subgroups show the same order of means, with the differences significant in two: white boys in grades 4-5 and Negro girls in grades 2-3. In all subgroups, the means for transfer pupils are below those of receiving-school pupils, although the differences are negligible in some cases.

No consistent race or sex differences are apparent, although the means of white pupils tend to be slightly higher, overall, than those of Negro pupils.

Posttransfer data for Peer Relationships, appearing in Table 8-12, show an interesting change in the relative position of the transfer group. On the fall posttransfer measure, means for the transfer pupils are seen to have increased from the pretransfer level to equal the means of the nontransfer group. Means for both groups continue to be somewhat lower than the receiving-school means, though the difference is significant only for grades 4-5. In contrast to the shift for the transfer group, fall posttransfer means for the nontransfer and receiving-school groups are virtually identical to their pretransfer means.

On the final posttransfer measure, means for the transfer group exceed those for the nontransfer group but are still somewhat below the receiving-school means. The reversal of positions for the transfer and nontransfer groups here reflects both slight increases in the transfer means and slight decrements in the nontransfer means between fall and spring.

The findings here are suggestive of the findings for the sociometric measure Acceptance by Peers, discussed in the preceding section. The two measures are significantly correlated, but the magnitude of the relationship is very small (r = .12, .11, and .20 for the three assessment periods.)

Table 8-11. PEER RELATIONSHIPS (SA): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	11.5	2.4	4	11.2	1.9	21	10.5	1.0	4	10.4	2.0	26	10.8	1.9	55
NT	12.2	2.4	31	11.1	2.3	28	11.9	1.9	34	11.6	2.0	38	11.7	2.1	131
R	12.1	1.8	114	11.6	2.7	5	12.4	1.7	118	13.5	3.5	2	12.2	1.8	239
	F= 0.209			F= 0.090			F= 2.720			F= 4.241*			F=12.723**		
4-5: T	9.7	2.7	6	12.0	1.5	18	12.8	1.3	4	10.3	2.3	12	11.2	2.1	40
NT	12.0	2.2	34	11.4	2.1	34	12.4	2.0	34	11.1	2.2	28	11.8	2.2	130
R	12.5	2.1	99	13.6	1.5	5	13.0	1.7	95	11.7	2.3	7	12.7	1.9	206
	F= 5.294**			F= 2.910			F= 1.458			F= 0.894			F=14.770**		

Table 8-12. PEER RELATIONSHIPS (SA): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
2-3: T	12.7	0.6	3	12.1	1.7	17	13.0	0.0	1	11.2	2.4	23	11.7	2.1	44
NT	12.6	2.0	28	11.0	2.2	21	12.5	1.8	33	11.1	1.7	36	11.8	2.0	118
R	12.1	1.9	285	10.0	2.4	7	12.3	2.0	275	11.7	2.6	7	12.2	2.0	574
	F= 0.809			F= 2.850			F= 0.375			F= 0.249			F= 2.233		
4-5: T	11.0	2.6	5	12.4	2.2	16	11.0	5.6	3	11.5	2.4	10	11.8	2.6	34
NT	12.1	2.1	35	11.5	1.9	28	12.3	2.2	34	11.2	1.9	24	11.8	2.1	121
R	12.4	2.1	213	11.7	0.6	3	12.9	1.9	234	12.5	1.0	6	12.7	2.0	456
	F= 1.515			F= 1.143			F= 2.703			F= 1.045			F=10.325**		
							Posttransfer 2 (Spring)								
2-3: T	12.7	1.2	3	10.8	2.4	13	12.5	0.7	2	12.2	2.5	22	11.8	2.4	40
NT	12.0	2.3	28	11.6	2.3	20	11.8	1.9	35	11.1	2.4	32	11.6	2.2	115
R	12.1	2.0	282	10.0	2.5	9	12.2	1.9	270	12.9	3.1	10	12.1	2.0	571
	F= 0.141			F= 1.498			F= 0.630			F= 2.241			F= 2.723		
4-5: T	11.8	1.9	5	12.3	1.7	16	13.0	1.7	3	11.5	2.5	10	12.1	2.0	34
NT	10.7	2.3	34	12.2	2.3	25	11.5	2.5	30	11.5	1.6	23	11.4	2.3	112
R	12.8	1.9	217	13.4	1.7	5	13.1	2.0	232	13.1	1.7	7	13.0	2.0	461
	F=17.222**			F= 0.740			F= 8.304**			F= 2.227			F=28.680**		

When the populations are divided by race and sex, the increased positive response of the transfer group is evident in most subgroups, though significant differences occur only on the final posttransfer measure, for white pupils in grades 4-5. Those differences reflect both increments for the transfer pupils (whose means on the first posttransfer measure were the lowest in their subgroups) and decrements in the nontransfer group.

As with the pretransfer data, no consistent race or sex differences are evident. Where differences do occur, the higher means appear more often among white pupils. White girls tend to have slightly higher means than white boys, overall, while among Negroes, the higher means are more often found for boys.

The analysis of change scores for Peer Relationships is reported in Table 8-13. No significant changes are found between the pretransfer and fall posttransfer measures, but the general pattern supports that found for the populations means: little or no change, on the whole, in the nontransfer and receiving-school groups, small increments in the transfer group. Among the transfer pupils, only white girls in grades 4-5 (n = 2) showed a negative mean change for this period.

From fall to spring, the changes are generally smaller in the transfer group than those seen in the fall, and only a few are positive. A significant (though small) decrement is seen among Negro transfer boys in grades 2-3. In the nontransfer group, little change is seen among Negro pupils, although the means are uniformly positive. White nontransfer subgroups showed decrements, however, all but one (for white boys in grades 2-3) statistically significant.

Net changes at the end of one year of desegregated schooling are uniformly positive for the transfer group, though significant only for Negro girls in grades 2-3. In all but one subgroup, however, net gains for these pupils are larger than the changes (either positive or negative) seen in the nontransfer and receiving-school pupils. In the nontransfer group, mean changes for Negro pupils tend to be positive; those for white pupils tend to be negative, with white boys in grades 4-5 showing a significant decrement. Generally speaking, however, changes in the nontransfer and receiving-school groups are negligible for the one-year period.

Table 3-13. CHANGE IN PEER RELATIONSHIPS (SA): PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
				Pretransfer to Posttransfer 1 (Fall)								
2-3: T	+ 1.3	2.3	3	+ 1.4	2.9	13	+ 2.0	0.0	1	+ 1.0	2.5	22
NT	+ 0.4	3.0	25	- 0.4	2.4	18	+ 0.6	2.3	30	- 0.5	2.6	27
R	+ 0.1	2.3	54	--	--	0	+ 0.1	2.4	60	--	--	0
4-5: T	+ 1.4	2.1	5	+ 0.3	1.6	16	- 3.5	6.4	2	+ 0.8	2.9	10
NT	+ 0.1	2.5	30	+ 0.4	2.4	24	+ 0.2	2.2	29	+ 0.3	2.3	21
R	+ 0.1	2.2	67	- 4.0	1.4	2	+ 0.4	1.8	57	- 0.5	2.1	2
				Posttransfer 1 to Posttransfer 2 (Spring)								
2-3: T	0.0	0.8	3	- 1.1*	1.3	13	- 1.0	0.0	1	+ 0.9	3.2	22
NT	- 0.2	1.9	25	+ 0.5	2.6	18	- 0.8*	1.7	30	+ 0.1	2.6	27
R	- 0.2	2.3	54	--	--	0	- 0.3	2.0	60	--	--	0
4-5: T	+ 0.8	1.5	5	- 0.1	2.5	16	+ 5.0	2.8	2	0.0	1.8	10
NT	- 1.4**	2.4	30	+ 0.2	1.8	24	- 1.1**	1.8	29	+ 0.4	2.3	21
R	+ 0.3	1.9	67	+ 1.0	1.4	2	- 0.3	1.8	57	+ 1.0	0.0	2
				Pretransfer to Posttransfer 2 (Spring)								
2-3: T	+ 1.3	2.5	3	+ 0.3	3.3	13	+ 1.0	0.0	1	+ 1.8**	2.9	22
NT	+ 0.2	2.6	25	+ 0.1	2.4	18	- 0.2	2.2	30	- 0.3	3.7	27
R	0.0	2.0	54	--	--	0	- 0.2	2.5	60	--	--	0
4-5: T	+ 2.2	2.4	5	+ 0.2	2.3	16	+ 1.5	3.5	2	+ 0.8	2.3	10
NT	- 1.2**	2.4	30	+ 0.7	2.9	24	- 0.9	2.9	29	+ 0.7	1.9	21
R	+ 0.4	2.5	67	- 3.0	0.0	2	0.0	2.0	57	+ 0.5	2.1	2

SA: Negative Interpersonal Relationships

Pretransfer data for the Negative Interpersonal Relationships scale are presented in Table 8-14. The pattern for the three populations is the same as that found for the previous measure: initial perceptions of significant others in the school setting are least positive in the transfer group, followed in order by the nontransfer and receiving-school groups. Differences are significant in both grade groups.

Within race-sex subgroups, means for the transfer group are consistently lower than the receiving-school means, but not in all cases lower than the nontransfer means. Significant differences are found among white boys and girls in grades 4-5, where the means are slightly higher for the transfer group than for the nontransfer group, and among Negro girls in grades 2-3, where the transfer mean is slightly higher than the nontransfer mean.

Race and sex show no general relationship to the pretransfer measure. Among white pupils, the means for girls are uniformly higher than means for boys. Among Negro pupils, the only apparent consistency is at grades 4-5, where boys have the higher means.

Posttransfer data for Negative Interpersonal Relationships are reported in Table 8-15. For the fall posttransfer measure, a general rise in means is apparent which is greatest in the transfer group and least in the nontransfer group. Differences between the fall and spring posttransfer measures are seen only in the transfer group, where a negligible increase is apparent in grades 2-3 and a small decrement in grades 4-5. For both grade groups, the highest means occur in the receiving-school group. Significant differences are found for both grade groups, on both posttransfer measures.

Within race-sex subgroups, no consistent order of means is found for the three populations in either posttransfer measure. In general, white transfer pupils show a less positive response than their counterparts in the nontransfer and receiving-school groups; this is not consistently true for girls, however. Significant differences occur in both posttransfer measures among white boys in grades 4-5, and in the final posttransfer measure for Negro girls in grades 2-3. In the latter subgroup, the mean for transfer pupils is higher than both the nontransfer and receiving-school means.

Table 3-14. NEGATIVE INTERPERSONAL RELATIONSHIPS[a] (SA): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	14.5	3.8	4	14.6	3.5	21	16.5	3.1	4	16.0	2.8	26	15.4	3.1	55
NT	17.1	3.4	31	16.1	2.8	28	17.5	2.9	34	15.7	2.5	38	16.6	3.0	131
R	16.8	3.1	114	17.0	4.3	5	17.6	3.0	118	21.5	3.5	2	17.2	3.1	239
		F= 1.202			F= 1.858			F= 0.255			F= 4.577*			F= 8.325**	
4-5: T	13.7	2.4	6	16.7	3.0	18	14.2	6.3	4	15.2	1.7	12	15.6	3.1	40
NT	16.6	3.3	34	16.5	3.3	34	18.5	3.2	34	15.2	3.6	28	16.8	3.5	130
R	17.4	3.4	99	16.4	2.6	5	18.7	3.0	95	14.6	5.0	7	17.9	3.4	206
		F= 3.872*			F= 0.021			F= 3.763*			F= 0.113			F= 9.587**	

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[a] Scale direction is the reverse of that implied by the title. High scores indicate positive interpersonal relationships.

Table 8-15. NEGATIVE INTERPERSONAL RELATIONSHIPS (SA): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
2-3: T	17.0	6.6	3	15.8	2.9	17	17.0	0.0	1	16.9	3.1	23	16.5	3.3	44
NT	17.4	3.5	28	16.3	3.3	21	18.1	2.5	33	15.6	2.8	36	16.9	3.1	118
R	17.5	2.9	285	15.3	4.4	7	18.2	2.9	275	17.3	1.7	7	17.8	3.0	574
	F= 0.065			F= 0.289			F= 0.038			F= 1.883			F= 8.191**		
4-5: T	16.4	3.5	5	18.8	3.2	16	18.7	7.6	3	18.2	3.4	10	18.3	3.7	34
NT	17.6	3.7	35	17.5	3.0	28	18.5	3.6	34	16.0	3.4	24	17.5	3.5	121
R	18.8	3.2	213	17.3	4.0	3	19.3	2.9	234	19.3	3.2	6	19.1	3.0	456
	F= 3.052*			F= 0.905			F= 1.177			F= 3.064			F=11.435**		
							Posttransfer 2 (Spring)								
2-3: T	15.3	3.8	3	14.4	3.2	13	19.5	0.7	2	18.0	2.7	22	16.7	3.3	40
NT	17.4	3.7	28	16.6	3.6	20	17.7	2.9	35	15.9	3.0	32	16.9	3.3	115
R	17.6	2.9	282	15.8	4.5	9	18.1	3.1	270	17.0	3.4	10	17.8	3.0	571
	F= 0.864			F= 1.362			F= 0.510			F= 3.168*			F= 5.521**		
4-5: T	15.4	3.7	5	18.9	3.2	16	17.0	6.9	3	17.5	4.2	10	17.8	4.0	34
NT	16.9	3.0	34	18.0	3.0	25	18.1	3.5	30	16.9	3.0	23	17.4	3.1	112
R	18.6	2.8	217	18.0	3.7	5	19.4	3.1	232	18.7	1.6	7	19.0	3.0	461
	F= 8.387**			F= 0.400			F= 2.908			F= 0.858			F=12.777**		

General tendencies are apparent in the posttransfer data for white pupils to show a more positive response than Negro pupils, and for white girls to score higher than white boys. Differences between the means of Negro girls and boys favor the two groups about equally.

Table 8-16 reports pre- to posttransfer changes for pupils tested on all three occasions. This analysis bears out the general upward shift in population means observed in the first posttransfer measure. Changes reflected in that measure are uniformly positive (though in some cases negligible) in all subgroups, with the single exception of Negro receiving-school boys in grades 4-5 ($n = 2$). The increments for transfer pupils are substantially greater than those in the other two groups except among Negro girls. Gains for the latter are only slightly greater than gains for Negro nontransfer girls in grades 2-3; they are substantially greater than the nontransfer gains in grades 4-5 but less than the mean increment for the two Negro receiving-school girls. Significant increments, indicating the expression of more positive perceptions of classmates and teachers, are seen only in grades 4-5, where they occur in all of the transfer subgroups except white girls ($n = 2$), and in white receiving-school boys and girls.

Between fall and spring of the posttransfer year, changes in all three populations are inconsistent in direction and generally smaller than those observed in the fall; none are statistically significant. Net changes from the pretransfer year to the end of the posttransfer year are uniformly positive except for small decrements for white nontransfer girls. Significant increments occur only for Negro transfer girls in grades 2-3, for Negro nontransfer girls in grades 4-5, and for white receiving-school boys and girls in grades 4-5. However, mean increments are consistently greater for transfer pupils than for nontransfer pupils, and with one exception greater than those observed in the receiving-school group.

Thus, the findings here reinforce those from the Peer Relationships scale, and from the sociometric measure reflecting acceptance of peers, in demonstrating a strong differential tendency for the transfer pupils to describe their interpersonal relationships in school as more positive during the first year of desegregated schooling than during the preceding year in the de facto segregated school. The three measures likewise concur, however, in showing that positive response to be greatest early in the posttransfer year, and to diminish somewhat thereafter.

Table 8-16. CHANGE IN NEGATIVE INTERPERSONAL RELATIONSHIPS (SA): PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)					
2-3: T	+ 2.3	8.5	3	+ 1.6	5.8	13	+ 2.0	0.0	1	+ 0.7	2.7	22
NT	+ 0.5	3.1	25	+ 0.2	4.2	18	+ 0.1	2.7	30	+ 0.5	2.7	27
R	+ 0.5	2.9	54	--	--	0	+ 0.1	2.5	60	--	--	0
4-5: T	+ 2.8*	1.6	5	+ 2.1	3.2	16	+ 8.0	7.1	2	+ 3.1	3.1	10
NT	+ 1.3	3.5	30	+ 0.9	3.5	24	+ 0.1	2.9	29	+ 1.2	2.8	21
R	+ 1.4**	3.3	67	- 0.5	2.1	2	+ 0.9*	3.4	57	+ 6.0	5.7	2
							Posttransfer 1 to Posttransfer 2 (Spring)					
2-3: T	- 1.7	4.7	3	- 1.2	4.2	13	+ 2.0	0.0	1	+ 1.0	3.1	22
NT	+ 0.6	2.6	25	+ 0.2	4.6	18	- 0.5	2.8	30	+ 0.5	2.4	27
R	0.0	2.9	54	--	--	0	- 0.1	3.0	60	--	--	0
4-5: T	- 1.0	2.2	5	+ 0.1	2.1	16	- 2.0	1.4	2	- 0.7	2.1	10
NT	- 0.8	3.0	30	+ 0.2	3.3	24	- 0.7	2.1	29	+ 0.9	2.3	21
R	- 0.3	2.4	67	+ 0.5	2.1	2	+ 0.1	2.6	57	- 1.5	3.5	2
							Pretransfer to Posttransfer 2 (Spring)					
2-3: T	+ 0.7	3.8	3	+ 0.4	5.0	13	+ 4.0	0.0	1	+ 1.7*	3.2	22
NT	+ 1.1	3.7	25	+ 0.4	3.4	18	- 0.4	3.0	30	+ 1.0	3.4	27
R	+ 0.5	3.5	54	--	--	0	0.0	3.2	60	--	--	0
4-5: T	+ 1.8	2.8	5	+ 2.2	4.1	16	+ 6.0	5.7	2	+ 2.4	4.0	10
NT	+ 0.5	2.5	30	+ 1.1	4.1	24	- 0.6	2.8	29	+ 2.0**	3.0	21
R	+ 1.2**	3.2	67	0.0	0.0	2	+ 1.1	3.3	57	+ 4.5	2.1	2

3. Summary

In general, the transfer pupils appear to have been somewhat less well accepted by their receiving-school classmates than they were the previous year by their classmates in the _de facto_ segregated school. In the fall of the posttransfer year mean acceptance scores for the transfer group dropped somewhat from the pretransfer levels in all grades, and particularly in the four upper grades. At the end of the posttransfer year, transfer pupils in grades K-1 showed a small further decrement in mean acceptance score, while those in the higher grades showed little or no change from the fall measure.

This general finding of a loss in peer status among transfer pupils is tempered to some extent by comparisons with the data for nontransfer and receiving-school pupils. Nontransfer pupils, who experienced no change in reference group for the posttransfer year, nonetheless showed an overall decrement in acceptance by peers. And, with some notable exceptions, these decrements were of a similar magnitude to those occurring in the transfer group. The exceptions were Negro girls in grades 2-3 and Negro boys and girls in grades 4-5; for those pupils, substantially larger decrements occurred in the transfer group.

Comparisons of the transfer and receiving-school pupils indicate that Negro children in the transfer group were as well or better accepted by their receiving-school classmates than were Negro children residing in the receiving-school neighborhoods. However, white children in the transfer group tended to be somewhat less well accepted than white neighborhood children, on the whole.

Both sociometric and self-report data show that the transfer group expressed more positive perceptions of significant others in the receiving-school environment (i.e., classmates and teachers), compared to perceptions expressed previously in the _de facto_ segregated school. An opposite tendency appeared among nontransfer pupils, who generally expressed less positive perceptions of the interpersonal milieu in their school during the posttransfer year than during the pretransfer year. The increased positive response of the transfer group is best described as a strong initial reaction which diminished to some extent over the course of the year.

Chapter 9

REACTIONS TO SCHOOL

This chapter presents findings from several self-report measures reflecting the child's perceptions of, and reactions to, his school experience. The measures, all administered in grades 2-5, deal with pupil perceptions of the school climate, with self-perceived behavior in school, and with school-related anxiety.

1. School Climate

Two scales from the Classroom Questionnaire reflect the child's expressed perceptions of the learning climate in his classroom. One scale, Supportive Classroom Milieu, touches on several aspects of climate, as exemplified by the following items: "In this class, I have a chance to express my own ideas," "I feel there are too many rules," "This teacher upsets me by things he (she) does," "Pupils in this class get mixed up and are not sure what they are supposed to do." The scale contains 13 items, each responded to on a 4-point scale (generally of the format "almost always," "usually," "sometimes," "hardly ever"), for a maximum score of 52.

The second scale, Perception of Teacher as Learning Facilitator, is narrower in scope. It contains 7 items with a response format comparable to that of the preceding measure. Illustrative items include "Does the teacher correct your work so you know how well you do?" "Does the teacher give attention to individual kids in your class who don't seem to understand the work?" and "This teacher makes most everything seem interesting and important."

Correlations between these scales are modest (.32, .38, and .44 for the three assessment periods) and indicate only a small degree of overlap in the characteristics measured.

It should be pointed out here, because it is especially relevant for the data reported in this chapter, that teachers were excused from the classroom during the administration of all special tests and inventories except the scholastic aptitude and achievement tests, for which some remained to assist with proctoring. Pupils were likewise reassured, prior to each testing session, that neither teachers nor classmates would see their test responses.

CQ: Supportive Classroom Milieu

Pretransfer data for Supportive Classroom Milieu are shown in Table 9-1. For the populations as a whole, the transfer pupils describe their pretransfer climate as significantly less supportive than do the nontransfer and receiving-school pupils. Means for the latter two groups are similar at grades 2-3; at grades 4-5, the mean for receiving-school pupils is slightly higher.

When the populations are divided by race and sex, the lowest means generally continue to fall in the transfer group, although the only significant difference occurs among Negro girls in grades 2-3. Only among Negro boys in those two grades are the transfer and nontransfer means comparable.

Irrespective of group membership, pretransfer classroom climate tends to be perceived as slightly more supportive by white pupils than by Negro pupils of the same sex. Within populations and grades, white girls report slightly greater classroom support than white boys, while the means for Negro girls and Negro boys are generally similar.

Posttransfer data for this school climate measure appear in Table 9-2, and continue to reflect significant differences among the three populations. However, the fall posttransfer measure shows mean increments in perceived classroom support for both transfer and receiving-school pupils, with little change occurring thereafter except for a slight drop in the transfer mean at grades 2-3. For the nontransfer group, on the other hand, pre- and posttransfer means are very similar. The net result is a reduction in initial differences between the transfer and nontransfer groups at grades 2-3, and the disappearance of those differences at grades 4-5; in fact, in the final posttransfer measure, the transfer mean is slightly higher. The highest posttransfer means consistently occur in the receiving-school group.

Significant posttransfer differences within the race-sex subgroups occur among white pupils only (girls in grades 2-3, final measure; boys in grades 4-5, both measures) and in all cases show less support perceived by the transfer pupils than by the nontransfer and receiving-school groups. Negro transfer pupils tend to have slightly higher means on the first posttransfer measure than their nontransfer and receiving-school counterparts; this is not consistently true in the

Table 9-1. SUPPORTIVE CLASSROOM MILIEU (CQ): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	31.2	8.2	4	33.0	4.3	21	34.5	6.5	4	32.4	4.7	26	32.7	4.9	55
NT	37.2	5.9	31	32.8	6.0	28	38.8	3.7	33	35.4	5.4	36	36.1	5.6	128
R	35.2	6.1	183	29.3	4.5	3	36.6	5.7	154	28.0	0.0	1	35.7	6.0	341
	F= 2.392			F= 0.661			F= 2.589			F= 5.358*			F= 7.501**		
4-5: T	33.8	7.7	6	32.4	4.5	17	34.2	12.1	4	33.7	5.6	12	33.2	6.1	39
NT	37.0	5.4	34	34.7	6.5	34	38.9	5.4	34	35.1	3.8	28	36.5	5.6	130
R	38.0	6.4	119	--	--	0	39.5	6.7	99	--	--	0	38.7	6.6	218
	F= 1.454			F= 1.730			F= 1.268			F= 0.906			F=14.675**		

Table 9-2. SUPPORTIVE CLASSROOM MILIEU (CQ): POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 1 (Fall)								
2-3:	T	37.3	6.8	3	33.5	6.6	17	35.0	0.0	1	36.4	7.2	23	35.3	6.9	44
	NT	37.8	6.4	28	32.8	6.7	20	40.1	5.6	34	34.4	4.4	36	36.5	6.3	118
	R	36.4	6.5	285	28.6	6.7	7	39.0	5.6	276	34.2	6.9	6	37.5	6.3	574
		F= 0.598			F= 1.418			F= 1.049			F= 0.967			F= 3.240*		
4-5:	T	35.0	8.3	5	39.6	5.3	16	35.3	6.8	3	37.2	5.2	10	37.8	5.9	34
	NT	37.3	7.2	35	36.0	6.9	28	40.3	6.8	34	36.4	4.6	24	37.6	6.7	121
	R	40.1	6.6	213	36.3	1.5	3	41.2	6.0	235	34.0	5.7	6	40.5	6.4	457
		F= 3.785*			F= 1.722			F= 1.623			F= 0.831			F=11.516**		
								Posttransfer 2 (Spring)								
2-3:	T	33.7	9.6	3	31.2	6.6	13	28.5	3.5	2	36.3	6.2	22	34.0	6.8	40
	NT	38.0	7.0	28	33.7	6.0	19	37.8	6.5	35	34.8	4.8	32	36.3	6.3	114
	R	36.8	6.9	282	33.1	9.0	8	39.6	6.0	271	36.2	6.9	10	38.1	6.6	571
		F= 0.745			F= 0.525			F= 4.714**			F= 0.559			F= 9.381**		
4-5:	T	34.2	7.5	5	38.4	6.6	16	41.7	2.5	3	38.4	6.4	10	38.1	6.4	34
	NT	35.2	7.1	33	35.6	7.3	25	39.8	6.5	30	38.4	5.4	23	37.2	6.9	111
	R	39.8	6.4	216	34.6	4.7	5	41.4	6.2	232	37.6	2.8	7	40.5	6.3	460
		F= 8.686**			F= 1.034			F= 0.815			F= 0.069			F=12.989**		

final posttransfer measure, however.

As with the pretransfer data, posttransfer means tend to be higher for whites than Negroes, and for girls than boys, within populations, grades, and racial groups.

The analysis of change scores for pupils tested on all three occasions is reported in Table 9-3. In the fall posttransfer measure, significant gains are seen in two of the transfer subgroups (Negro girls in grades 2-3, Negro boys in grades 4-5), in three receiving-school subgroups (white boys and girls in grades 2-3, white boys in grades 4-5), and in nontransfer white girls in grades 4-5. With two exceptions, all the transfer subgroups showed incrememts over the pretransfer level, while their nontransfer and receiving-school counterparts showed either lesser increments or decrements. The exceptions are the one white transfer girl in grades 2-3, whose score decreased, and Negro transfer boys in those grades, who showed little change overall.

No significant changes in perceived classroom support are found for transfer pupils between fall and spring of the posttransfer year. An overall downward trend is apparent, however, in grades 2-3. During this period, two of the white nontransfer subgroups (girls in grades 2-3, boys in grades 4-5) showed significant decrements, while white receiving-school girls in grades 4-5 showed a small but significant increment.

The net result, for the transfer group, is an overall posttransfer increase in the positiveness of support perceived by Negro girls and white boys (although the increase is significant only for Negro girls in grades 2-3), and significant increases for Negro boys and white girls in grades 4-5. Only among Negro boys and the one white girl in grades 2-3 are net decrements seen for the year, and neither is statistically significant. In the nontransfer group, there is little net change except among Negro girls in grades 4-5, who responded with a significantly more positive view of the classroom climate at the end of the posttransfer year. The two Negro receiving-school pupils represented in this analysis have a slightly lower mean score at the end of the year; all of the white receiving-school subgroups, on the other hand, showed significant net gains. The latter finding raises a provocative question about the impact of a new reference group on pupils in the predominantly white receiving schools: does the presence of the predominantly Negro transfer group in receiving-school classes result, somehow,

Table 9-3. CHANGE IN SUPPORTIVE CLASSROOM MILIEU (CQ): PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)					
2-3: T	+ 5.0	5.2	3	- 0.5	7.2	12	- 8.0	0.0	1	+ 4.1**	6.2	22
NT	- 0.4	6.3	25	- 3.4	6.9	17	+ 1.7	4.6	29	- 0.5	6.9	26
R	+ 2.3**	7.3	97	- 4.5	7.8	2	+ 3.1**	5.5	81	--	--	0
4-5: T	+ 3.8	5.6	5	+ 7.6**	6.2	16	+ 7.5	2.1	2	+ 2.3	8.7	10
NT	+ 0.8	6.2	30	- 0.3	5.0	24	+ 2.0*	4.5	29	+ 1.2	3.7	21
R	+ 2.8**	6.2	89	--	--	0	+ 1.5	6.9	74	--	--	0
							Posttransfer 1 to Posttransfer 2 (Spring)					
2-3: T	- 3.7	3.1	3	- 2.3	8.3	12	- 4.0	0.0	1	- 0.6	6.6	22
NT	+ 1.0	5.9	25	+ 2.5	7.1	17	- 2.9*	5.8	29	+ 0.8	6.9	26
R	+ 0.3	6.2	97	+ 1.5	3.5	2	+ 0.2	5.5	81	--	--	0
4-5: T	- 0.8	4.6	5	- 1.1	4.2	16	+10.0	1.4	2	+ 1.2	4.6	10
NT	- 2.5*	6.5	30	- 0.4	3.9	24	- 1.2	4.7	29	+ 1.3	3.8	21
R	- 0.3	5.7	89	--	--	0	+ 1.4*	5.0	74	--	--	0
							Pretransfer to Posttransfer 2 (Spring)					
2-3: T	+ 1.3	6.5	3	- 2.8	5.5	12	-12.0	0.0	1	+ 3.5*	6.5	22
NT	+ 0.6	7.2	25	- 0.9	7.7	17	- 1.2	6.1	29	+ 0.3	7.1	26
R	+ 2.6**	8.6	97	- 3.0	4.2	2	+ 3.3**	7.0	81	--	--	0
4-5: T	+ 3.0	6.1	5	+ 6.4**	6.4	16	+17.5*	0.7	2	+ 3.5	7.7	10
NT	- 1.7	7.2	30	- 0.7	5.8	24	+ 0.7	5.1	29	+ 2.6**	4.0	21
R	+ 2.4**	6.8	89	--	--	0	+ 2.9**	7.0	74	--	--	0

in increased rewards for the white child, in terms of perceived supportiveness of the general classroom milieu?

CQ: Perception of Teacher as Learning Facilitator

Pretransfer data for the second school climate measure, focusing on the classroom teacher, are presented in Table 9-4. In contrast to the measure of general classroom milieu, above, this measure shows no appreciable differences among the three populations. The supportiveness of teachers is perceived as equally positive in all three groups.

When the populations are divided by race and sex, only white girls in grades 2-3 deviate much from this general pattern. For that subgroup, perceived teacher support is significantly greater among transfer pupils (n = 4) than in the nontransfer and receiving-school groups.

Within populations and grades, white pupils tend to perceive teachers as slightly more supportive than do Negro pupils of the same sex. No consistent differences are evident within racial groups.

Posttransfer data for perceived teacher supportiveness are shown in Table 9-5. These data reflect no appreciable change from the pretransfer data, although there is a suggestion of a slight downward trend in the scores of some of the transfer subgroups. No significant differences occur in the first posttransfer measure; only one is seen in the final measure. That difference, among Negro girls in grades 2-3, shows somewhat higher (and similar) means for transfer and receiving-school pupils, compared to nontransfer pupils.

White pupils continue to show a tendency toward slightly higher means, on the whole, but both race and sex differences are of small magnitude.

The analysis of change scores, reported in Table 9-6, show little change in perceived teacher supportiveness over the one-year period of the study. At grades 4-5, a tendency is seen in both transfer and nontransfer pupils, and in white receiving-school boys, to show a slight increase in the fall posttransfer measure followed by a slight decrease in the spring measure. The only significant change, however, is the fall-to-spring decrement in fourth- and fifth-grade nontransfer white girls. No consistent trend is apparent in grades 2-3. Net changes from the pretransfer measure are negligible

Table 9-4. PERCEPTION OF TEACHER AS LEARNING FACILITATOR (CQ): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	22.2	1.0	4	19.3	2.7	21	25.0	1.6	4	21.2	3.0	26	20.9	3.1	55
NT	20.4	3.6	31	19.9	3.3	26	21.1	2.9	33	19.6	3.3	35	20.2	3.3	125
R	20.5	3.2	184	18.3	2.5	3	21.2	2.9	154	18.0	0.0	1	20.8	3.1	342
	F= 0.611			F= 0.497			F= 3.607*			F= 3.869			F= 1.399		
4-5: T	21.5	1.6	6	19.3	3.5	17	20.2	3.3	4	19.6	4.3	12	19.8	3.5	39
NT	21.1	3.4	34	19.9	3.3	34	21.6	1.9	34	20.4	3.2	28	20.8	3.0	130
R	20.8	3.0	119	--	--	0	20.7	3.5	99	--	--	0	20.8	3.2	218
	F= 0.203			F= 0.379			F= 1.053			F= 0.479			F= 1.526		

Table 9-5. PERCEPTION OF TEACHER AS LEARNING FACILITATOR: POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 1 (Fall)								
2-3:	T	20.3	0.6	3	19.5	4.3	17	23.0	0.0	1	22.1	3.0	23	21.0	3.7	44
	NT	21.4	3.8	28	20.0	2.9	20	22.0	2.5	34	19.9	3.9	36	20.9	3.5	118
	R	20.7	3.2	285	21.3	3.3	7	21.2	3.0	276	19.5	2.0	6	20.9	3.1	574
		F= 0.508			F= 0.606			F= 2.320			F= 3.149			F= 0.040		
4-5:	T	21.2	4.4	5	20.6	3.3	16	21.0	3.0	3	20.3	4.2	10	20.6	3.6	34
	NT	21.3	2.8	35	21.0	4.0	28	21.9	3.1	34	20.8	2.9	24	21.3	3.2	121
	R	21.0	3.1	213	19.7	0.6	3	20.8	3.2	235	18.8	1.6	6	20.9	3.1	457
		F= 0.089			F= 0.228			F= 1.522			F= 0.952			F= 0.930		
								Posttransfer 2 (Spring)								
2-3:	T	19.3	2.3	3	18.4	4.6	13	18.5	5.0	2	22.3	3.5	22	20.6	4.2	40
	NT	21.3	3.4	28	20.3	3.4	19	21.7	3.4	35	20.4	3.0	32	21.0	3.3	114
	R	20.9	3.4	282	19.8	3.7	8	21.4	2.9	271	22.7	3.1	10	21.1	3.2	571
		F= 0.562			F= 0.946			F= 1.210			F= 3.363*			F= 0.541		
4-5:	T	19.8	2.8	5	20.0	3.5	16	21.7	3.1	3	18.6	3.1	10	19.7	3.2	34
	NT	20.6	3.3	33	20.0	3.0	25	20.9	2.9	30	20.6	2.5	23	20.5	3.0	111
	R	20.5	3.2	216	20.2	3.0	5	20.7	3.1	232	20.3	3.7	7	20.6	3.2	460
		F= 0.136			F= 0.011			F= 0.216			F= 1.643			F= 1.261		

Table 9-6. CHANGE IN PERCEPTION OF TEACHER: PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)					
2-3: T	- 1.7	0.6	3	- 0.8	4.4	12	0.0	0.0	1	+ 0.4	3.5	22
NT	+ 0.6	5.1	25	+ 1.6	3.6	15	+ 0.8	3.0	29	+ 1.0	4.5	24
R	+ 0.7	4.3	97	- 2.5	3.5	2	+ 0.5	3.0	81	--	--	0
4-5: T	0.0	4.1	5	+ 1.2	3.2	16	+ 5.0	2.8	2	+ 0.4	6.2	10
NT	+ 0.4	4.1	30	+ 1.0	3.7	24	+ 0.7	2.7	29	+ 0.5	3.7	21
R	+ 0.2	4.2	89	--	--	0	- 0.8	4.6	74	--	--	0
							Posttransfer 1 to Posttransfer 2 (Spring)					
2-3: T	- 1.0	2.6	3	- 0.7	6.0	12	- 8.0	0.0	1	+ 0.1	3.4	22
NT	+ 0.3	3.4	25	- 0.3	3.0	15	- 0.4	4.0	29	0.0	3.1	24
R	- 0.3	4.0	97	+ 1.5	0.7	2	+ 0.3	3.3	81	--	--	0
4-5: T	- 1.4	5.7	5	- 0.6	2.8	16	- 2.5	0.7	2	- 1.7	2.9	10
NT	- 0.5	3.1	30	- 1.5*	3.3	24	- 1.3*	2.6	29	- 0.1	3.4	21
R	- 0.6	3.2	89	--	--	0	- 0.1	3.1	74	--	--	0
							Pretransfer to Posttransfer 2 (Spring)					
2-3: T	- 2.7	3.2	3	- 1.5	5.7	12	- 8.0	0.0	1	+ 0.5	3.1	22
NT	+ 0.9	4.2	25	+ 1.3	3.4	15	+ 0.4	3.8	29	+ 1.0	3.7	24
R	+ 0.4	4.9	97	- 1.0	2.8	2	+ 0.9	3.8	81	--	--	0
4-5: T	- 1.4	2.7	5	+ 0.7	3.4	16	+ 2.5	2.1	2	- 1.3	4.8	10
NT	- 0.1	4.6	30	- 0.5	2.5	24	- 0.6	2.9	29	+ 0.3	4.1	21
R	- 0.4	4.4	89	--	--	0	- 0.9	4.2	74	--	--	0

in all cells representing more than a handful of pupils; none are significant.

2. Self-Perceived Behavior in School

The child's self-reported perceptions of his general behavior in school are reflected in a 6-item scale from the School Attitudes Card Sort. This scale, labeled Self-Perceived Troublemaker, contains six statements which the child describes as true for him most of the time, sometimes, hardly ever, or never. Illustrative items include "I have trouble keeping the rules in class," "I get blamed for things other kids do," and "My parents don't like the way I get along in school."

Pretransfer data for this scale appear in Table 9-7. Significant differences among the total populations show the transfer pupils exhibiting less acceptable behavior, as they view it, than that indicated in self-ratings by the nontransfer and receiving-school groups. The latter group shows the highest self-ratings on this measure, with the nontransfer group close behind.

Within race-sex subgroups, self-rated behavior in the transfer group continues to be least acceptable, except among Negro boys in grades 4-5, where mean values for the three groups differ only slightly. The only significant difference, however, occurs among white girls in grades 4-5.

Within populations and grades, a tendency is seen for white pupils to rate their behavior in school as more acceptable than do Negro pupils of the same sex. These differences are generally small, however, and not entirely consistent. Somewhat larger, on the whole, are the differences between boys and girls, the latter consistently having the higher means.

Posttransfer data, presented in Table 9-8, continue to show significant differences among the total groups and an overall pattern similar to that for the pretransfer year: the highest means occur in the receiving-school group, the lowest generally in the transfer group. A partial exception is seen in the first posttransfer measure for grades 4-5, where the transfer and nontransfer means are about the same, but significantly below the receiving-school mean.

Population means for the fall posttransfer measure tend to be slightly higher than the pretransfer means in all but

Table 9-7. SELF-PERCEIVED BEHAVIOR (SA):[a] PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	16.2	3.5	4	15.9	4.1	21	17.0	2.8	4	17.8	2.8	26	16.9	3.4	55
NT	17.6	3.4	31	16.6	3.7	28	19.7	2.7	34	18.3	3.1	38	18.2	3.4	131
R	18.1	3.2	114	17.4	3.0	5	19.4	2.6	117	18.0	8.5	2	18.7	3.0	238
	F= 0.901			F= 0.408			F= 1.846			F= 0.261			F= 7.901**		
4-5: T	16.8	4.3	6	16.9	3.4	18	18.2	5.1	4	17.4	2.6	12	17.2	3.4	40
NT	18.3	3.1	34	16.4	3.6	34	21.3	2.3	34	18.2	3.9	28	18.5	3.7	130
R	18.1	2.9	99	16.2	1.8	5	20.4	2.5	95	16.9	2.3	7	19.1	3.0	206
	F= 0.569			F= 0.162			F= 3.213*			F= 0.519			F= 5.734**		

[a] High scores indicate more acceptable behavior, lower scores less acceptable behavior.

Table 9-8. SELF-PERCEIVED BEHAVIOR (SA): POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 1 (Fall)								
2-3:	T	18.7	4.9	3	16.6	3.2	17	22.0	0.0	1	18.3	3.7	23	17.8	3.6	44
	NT	19.3	2.8	28	16.9	3.4	21	19.7	3.0	33	18.2	3.3	36	18.6	3.3	118
	R	18.3	3.0	285	13.9	4.8	7	20.3	2.5	275	17.0	2.4	7	19.2	3.0	574
		F= 1.326			F= 1.999			F= 1.392			F= 0.435			F= 5.153**		
4-5:	T	16.4	5.4	5	18.9	3.5	16	21.3	3.1	3	18.5	1.8	10	18.6	3.4	34
	NT	18.3	3.5	35	17.1	3.7	28	20.2	3.5	34	18.2	3.9	24	18.5	3.8	121
	R	18.8	3.0	213	18.3	4.0	3	20.7	2.5	234	19.2	3.5	6	19.8	2.9	456
		F= 1.725			F= 1.313			F= 0.742			F= 0.173			F= 8.780**		
								Posttransfer 2 (Spring)								
2-3:	T	18.7	0.6	3	14.4	2.8	13	20.5	3.5	2	17.9	3.1	22	16.9	3.4	40
	NT	18.7	3.6	28	15.6	3.4	20	20.7	1.9	35	19.0	3.3	32	18.8	3.5	115
	R	18.5	2.9	282	14.8	4.2	9	20.1	2.3	270	19.2	3.2	10	19.2	2.8	571
		F= 0.064			F= 0.496			F= 0.917			F= 1.022			F=11.266**		
4-5:	T	15.0	3.3	5	17.7	3.3	16	21.0	2.0	3	16.1	3.8	10	17.1	3.6	34
	NT	18.1	3.3	34	17.6	3.3	25	21.3	2.5	30	19.6	3.2	23	19.2	3.4	112
	R	19.0	2.8	217	16.0	2.6	5	20.8	2.5	232	20.4	3.1	7	19.9	2.8	461
		F= 5.864**			F= 0.583			F= 0.591			F= 4.658*			F=15.220**		

the nontransfer fourth- and fifth-graders, who showed no change. From fall to spring, on the other hand, means for the transfer group tended to diminish to the pretransfer level, while in the other two groups they remained about the same -- again excepting the nontransfer pupils in grades 4-5, whose mean increased slightly over this period.

When the populations are divided by race and sex, generally only slight differences are seen between the three groups. No significant differences are found within subgroups for the fall posttransfer measure, and only two for the subsequent spring measure, both at grades 4-5. There, the self-ratings of white transfer boys and Negro transfer girls indicate less acceptable behavior than do the self-ratings of their nontransfer and receiving-school counterparts. A similar tendency is seen among Negro transfer girls in grades 2-3.

Race-sex differences parallel those seen in the pretransfer measure. White pupils tend to see their behavior as slightly more acceptable than Negro pupils rate theirs. The same is true for girls compared to boys, the former having the higher means.

The analysis of changes in self-perceived behavior is reported in Table 9-9. Consistently in the transfer group, and at grades 2-3 in the nontransfer and receiving-school groups, the changes reflected in the fall posttransfer measure are positive, though generally small. Significant changes, all positive, occur only in white nontransfer boys at grades 2-3, and in white receiving-school girls in both grade groups.

No consistent pattern of change is evident between fall and spring of the posttransfer year. Negro transfer pupils tend to decrease their scores over this period, but the decrement is significant only for girls in grades 4-5.

At the end of the posttransfer year, no impressive net changes are apparent. A tendency is seen for most pupils to view their behavior slightly more positively than they did at the end of the pretransfer year, but net gains are significant only for some of the white subgroups: nontransfer boys and girls in grades 2-3, receiving-school girls in the same grades, and receiving-school boys in grades 4-5. Exceptions to this general pattern occur in some of the Negro subgroups (including fourth- and fifth-grade girls in the transfer group), who show small, nonsignificant decrements from their pretransfer levels.

Table 9-9. CHANGE IN SELF-PERCEIVED BEHAVIOR (SA): PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)						
2-3:	T	+ 3.7	6.0	3	+ 1.5	4.0	13	+ 1.0	0.0	1	+ 0.9	3.5	22
	NT	+ 1.7**	2.9	25	+ 0.1	3.1	18	+ 0.2	1.9	30	+ 0.8	3.1	27
	R	+ 0.6	3.4	54	--	--	0	+ 0.8*	3.0	59	--	--	0
4-5:	T	+ 0.2	1.8	5	+ 1.8	3.4	16	+ 6.0	2.8	2	+ 1.5	2.5	10
	NT	+ 0.6	2.8	30	+ 0.2	2.8	24	- 0.4	2.4	29	- 0.1	3.3	21
	R	+ 0.5	2.4	67	- 1.5	2.1	2	+ 0.6*	2.1	57	+ 2.0	2.8	2
							Posttransfer 1 to Posttransfer 2 (Spring)						
2-3:	T	0.0	4.3	3	- 1.3	4.1	13	+ 1.0	0.0	1	- 0.6	3.6	22
	NT	0.0	2.9	25	- 0.8	4.3	18	+ 0.9	2.4	30	+ 0.4	3.6	27
	R	0.0	3.4	54	--	--	0	+ 0.3	2.2	59	--	--	0
4-5:	T	- 1.4	3.8	5	- 1.2	2.3	16	+ 2.0	1.4	2	- 2.4*	3.0	10
	NT	- 0.6	2.0	30	+ 0.1	2.7	24	+ 0.5	1.9	29	+ 1.3	3.1	21
	R	+ 0.5	2.1	67	- 0.5	2.1	2	- 0.5	2.0	57	+ 0.5	2.1	2
							Pretransfer to Posttransfer 2 (Spring)						
2-3:	T	+ 3.7	2.5	3	+ 0.2	3.2	13	+ 2.0	0.0	1	+ 0.3	3.3	22
	NT	+ 1.6*	3.8	25	- 0.7	4.7	18	+ 1.1*	2.3	30	+ 1.3	3.4	27
	R	+ 0.5	3.4	54	--	--	0	+ 1.1**	2.6	59	--	--	0
4-5:	T	- 1.2	3.4	5	+ 0.5	3.2	16	+ 8.0	1.4	2	- 0.9	4.5	10
	NT	0.0	3.0	30	+ 0.3	2.5	24	+ 0.1	2.3	29	+ 1.2	2.9	21
	R	+ 1.0**	2.7	67	- 2.0	0.0	2	+ 0.1	2.4	57	+ 2.5	0.7	2

3. Anxiety

Measures of school-related anxiety were obtained from the School Attitudes Card Sort and the Classroom Questionnaire. From the former instrument, the measure is an 8-item scale called School Anxiety. Each item is responded to on a 4-point scale, for a maximum score of 24. Included are such items as "I get nervous in class," "I worry about doing well in school," and "I feel upset in school."

The Anxiety scale from the Classroom Questionnaire contains 6 items (maximum score 24), of which the following are illustrative: "After you take a test, do you worry about how well you did?" "When you think you are going to be called on by the teacher, do you get a funny feeling in your stomach?" "Do you worry about being able to do the work in this class?"

The two measures of anxiety are substantially correlated (.52, .60, and .61 in the three assessment periods), although perhaps somewhat less so than might be expected from the apparent similarity in item content and response format. On this point it should be noted that the testing techniques employed for the two scales differ -- one comes from an individually-administered card sort, the other from a questionnaire administered in the classroom -- and that administration of the two instruments was separated (depending on the overall testing schedule for a given class) by as much as 2-3 weeks.

A measure of general anxiety was obtained from the Sarason General Anxiety Scale for Children (GASC). It contains 45 items, 34 measuring anxiety and 11 comprising a so-called "lie scale," which purports to measure the child's willingness to admit anxiety. The items are answered "Yes" or "No" by the child, "yes" answers indicating general anxiety or, in the case of the lie scale, frankness of response.[1] Illustrative anxiety items include the following: "When you are alone in a room and you hear a strange noise, do you get a frightened feeling?" "Do some of the stories on radio or television scare you?" "Do you get worried when you have to go to the doctor's office?" "Are you frightened by lightning and thunderstorms?"

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[1] For the lie-scale items (e.g., "Are you ever unhappy?" "When you were younger, were you ever scared of anything?"), a "no" answer is probably never a truthful one. The items describe universal childhood experiences, which if denied, suggest that the child is responding defensively. Thus, a high score on the lie scale may mean an artificially low anxiety score, reflecting the child's reluctance to report anxiety.

The GASC data were not available when correlations were computed between the other measures. It is not possible, therefore, to report here the relationship between general anxiety and the measures of school-related anxiety employed in the present study.

SA: School Anxiety

Pretransfer data for the School Anxiety scale are presented in Table 9-10. Significant differences among the total populations show the transfer pupils expressing somewhat less anxiety during the pretransfer year than the nontransfer and receiving-school groups. Means for the latter two groups are similar, though slightly higher for receiving-school pupils.

When race and sex are taken into account, no significant differences are found and no consistent order of means within the subgroups. Within populations and grades, a tendency is seen for white pupils to express somewhat greater anxiety than Negro pupils of the same sex. Means for girls and boys are similar in many cases; where differences do occur, they favor the two sexes about equally.

Posttransfer data for School Anxiety, appearing in Table 9-11, continue to show significant differences among the three populations as a whole, and the same order of means. A tendency is observed for school anxiety to increase slightly among transfer and receiving-school pupils in the fall. This tendency is seen also among nontransfer pupils in grades 4-5; in grades 2-3, however, the fall nontransfer mean is slightly below the pretransfer level. In the final posttransfer measure, mean anxiety scores for the transfer group remain at the fall level (grades 4-5) or drop somewhat (grades 2-3), while the nontransfer and receiving-school means tend to increase slightly between fall and spring.

No consistent pattern of differences is apparent when the populations are divided by race and sex, and only three significant differences occur in the subgroups. On the fall posttransfer measure, Negro receiving-school boys in grades 2-3 showed significantly less anxiety than Negro transfer and

Table 9-10. SCHOOL ANXIETY (SA): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	26.2	4.1	4	21.0	6.0	21	21.5	1.3	4	21.7	4.2	26	21.8	5.0	55
NT	23.7	3.8	31	21.8	4.4	28	25.3	4.1	34	23.3	4.1	38	23.6	4.2	131
R	23.2	4.4	114	23.2	4.1	5	24.3	3.6	117	21.5	2.1	2	23.8	4.0	238
	F= 1.068			F= 0.392			F= 2.199			F= 1.222			F= 5.052**		
4-5: T	21.3	6.7	6	21.4	4.2	18	21.5	6.6	4	21.6	4.7	12	21.4	4.8	40
NT	24.3	4.2	34	21.4	4.8	34	25.1	4.2	34	21.9	3.8	28	23.2	4.5	130
R	23.8	4.4	99	22.4	3.3	5	24.1	4.3	95	20.3	4.8	7	23.8	4.4	206
	F= 1.106			F= 0.109			F= 1.560			F= 0.414			F= 4.745**		

Table 9-11. SCHOOL ANXIETY (SA): POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 1 (Fall)								
2-3:	T	24.7	8.5	3	20.8	5.0	17	26.0	0.0	1	22.3	5.4	23	22.0	5.4	44
	NT	24.0	3.8	28	21.6	4.8	21	24.0	4.1	33	21.7	4.8	36	22.9	4.5	118
	R	24.3	4.2	285	16.0	4.8	7	24.9	4.3	275	20.6	3.3	7	24.4	4.4	574
		F= 0.081			F= 3.516*			F= 1.407			F= 0.323			F=11.141**		
4-5:	T	20.4	4.9	5	23.1	4.4	16	21.0	10.0	3	22.9	5.4	10	22.5	5.2	34
	NT	24.7	4.6	35	22.8	4.6	28	24.9	4.9	34	21.8	3.7	24	23.7	4.7	121
	R	24.3	3.8	213	20.7	5.7	3	24.7	4.0	234	21.5	3.4	6	24.5	3.9	456
		F= 2.617			F= 0.363			F= 1.183			F= 0.319			F= 4.633*		
								Posttransfer 2 (Spring)								
2-3:	T	27.0	5.3	3	19.1	4.2	13	22.5	6.4	2	21.7	4.4	22	21.3	4.8	40
	NT	24.8	4.4	28	21.6	4.7	20	24.3	3.9	35	23.1	4.9	32	23.6	4.6	115
	R	24.5	3.9	282	19.9	5.2	9	25.0	4.1	270	23.2	5.1	10	24.6	4.1	571
		F= 0.678			F= 1.189			F= 0.701			F= 0.600			F=13.198**		
4-5:	T	19.6	3.4	5	24.2	2.7	16	20.0	7.0	3	21.6	5.0	10	22.4	4.2	34
	NT	24.9	4.1	34	23.6	3.8	25	26.2	4.2	30	22.6	4.3	23	24.5	4.3	112
	R	25.1	4.0	217	22.0	4.1	5	24.8	3.9	232	22.7	2.8	7	24.9	3.9	461
		F= 4.554*			F= 0.761			F= 3.882*			F= 0.219			F= 6.111**		

nontransfer boys. On the spring posttransfer measure, white transfer boys and girls in grades 4-5 showed less anxiety than their nontransfer and receiving-school counterparts.

Posttransfer race and sex differences within populations and grades follow the same pattern reported for the pretransfer measure: white pupils tend to score above Negro pupils of the same sex; differences between boys and girls do not favor one over the other with any consistency.

Change-score data for the School Anxiety scale are reported in Table 9-12. Mean changes reflected in the fall posttransfer measure are generally small, but with a few exceptions positive. Excluding those cells with only two or three cases, the exceptions are limited to girls in the nontransfer group: white nontransfer girls in grades 2-3 show a significant decrement in anxiety from the pretransfer level, and slight decrements are likewise seen for Negro nontransfer girls in both grade groups. In the transfer group, the largest increments occur among Negro pupils in grades 4-5; the increments are not statistically significant, however. The only significant gain in anxiety seen in the fall measure occurs among white receiving-school boys in grades 2-3.

Between fall and spring of the posttransfer year, no significant changes are seen in any of the subgroups. The small changes which do occur are consistently in the direction of increased anxiety, however, except in the transfer group. There, Negro pupils of both sexes in grades 2-3, and Negro girls and white boys in grades 4-5, show tendencies toward slightly diminished anxiety.

For the year as a whole, Negro transfer boys in grades 4-5 show a significant gain in anxiety, while the remaining transfer subgroups show little net change. The only other significant change, also positive, occurs in white nontransfer pupils at grades 2-3.

CQ: Anxiety

Pretransfer data for the Classroom Questionnaire Anxiety scale are shown in Table 9-13. In contrast to the measure just discussed, this scale did not differentiate the three populations in the pretransfer year. Group means are virtually identical at grades 2-3; at grades 4-5, they differ negligibly, with only half a raw score point separating the highest (transfer) and the lowest (receiving-school) means.

Table 9-12. CHANGE IN SCHOOL ANXIETY (SA): PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)						
2-3:	T	- 2.0	4.0	3	0.0	3.9	13	+ 3.0	0.0	1	+ 0.7	4.9	22
	NT	+ 1.2	4.0	25	+ 0.3	5.2	18	- 1.3*	3.4	30	- 0.6	4.1	27
	R	+ 1.1*	3.8	54	--	--	0	+ 0.3	3.8	59	--	--	0
4-5:	T	+ 1.0	1.4	5	+ 1.1	3.4	16	- 1.0	1.4	2	+ 1.5	4.7	10
	NT	+ 0.9	4.1	30	+ 0.6	4.4	24	+ 1.0	3.4	29	- 0.5	3.1	21
	R	+ 0.4	3.8	67	0.0	1.0	2	+ 0.3	3.2	57	- 0.5	3.5	2
							Posttransfer 1 to Posttransfer 2 (Spring)						
2-3:	T	+ 2.3	4.0	3	- 0.4	5.5	13	+ 1.0	0.0	1	- 0.5	4.7	22
	NT	+ 1.0	2.9	25	+ 0.2	6.7	18	+ 0.6	4.6	30	+ 1.1	4.6	27
	R	+ 0.1	4.6	54	--	--	0	+ 0.1	3.1	59	--	--	0
4-5:	T	- 0.8	1.6	5	+ 1.1	3.8	16	+ 4.0	2.8	2	- 1.3	4.1	10
	NT	+ 0.1	2.8	30	+ 0.5	4.3	24	0.0	2.9	29	+ 0.6	2.3	21
	R	+ 0.5	3.5	67	+ 0.5	0.7	2	+ 0.4	3.9	57	+ 3.0	1.4	2
							Pretransfer to Posttransfer 2 (Spring)						
2-3:	T	+ 0.3	0.6	3	- 0.4	4.4	13	+ 4.0	0.0	1	+ 0.2	5.2	22
	NT	+ 2.2*	4.4	25	+ 0.4	6.4	18	- 0.7	4.6	30	+ 0.4	5.0	27
	R	+ 1.2	4.8	54	--	--	0	+ 0.3	3.6	59	--	--	0
4-5:	T	+ 0.2	2.4	5	+ 2.2**	2.9	16	+ 3.0	4.2	2	+ 0.2	5.5	10
	NT	+ 1.0	2.9	30	+ 1.0	4.2	24	+ 0.9	4.0	29	0.0	3.2	21
	R	+ 0.9	3.9	67	+ 0.5	2.1	2	+ 0.7	3.8	57	+ 2.5	2.1	2

Table 9-13. ANXIETY (CQ): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	18.5	4.4	4	16.1	5.2	21	18.8	2.2	4	17.6	4.0	26	17.2	4.4	55
NT	17.9	3.8	31	16.2	3.8	28	17.5	3.2	34	16.8	4.2	36	17.1	3.8	129
R	17.5	3.9	183	17.3	3.1	3	17.1	3.6	154	13.0	0.0	1	17.3	3.7	341
	F= 0.310			F= 0.100			F= 0.539			F= 0.578			F= 0.107		
4-5: T	16.8	5.4	6	16.1	3.4	17	13.5	5.2	4	16.3	3.6	12	16.0	3.9	39
NT	17.0	3.8	34	14.4	3.4	34	18.1	2.8	34	15.0	4.4	28	16.2	3.9	130
R	16.8	3.1	119	--	--	0	16.1	3.6	99	--	--	0	16.5	3.4	218
	F= 0.067			F= 2.601			F= 5.831**			F= 0.796			F= 0.425		

As with the previous measure, no consistent order of means is evident in the subgroups. The one significant difference occurs among white girls in grades 4-5, where transfer pupils expressed less anxiety, and nontransfer pupils expressed more, than did pupils in the receiving schools. It is noteworthy that the difference between the transfer and nontransfer pupils in this case reflects both an atypically high nontransfer mean, relative to the means for other nontransfer subgroups at this grade level, and an atypically low mean for the transfer group. The latter mean, however, is based on only four pupils, who show considerable variance in their individual scores.

Within populations and grades, white pupils tend to have slightly higher Anxiety scores than do Negro pupils of the same sex, except among transfer girls in grades 4-5. Negro girls tend to score above Negro boys, but the slight differences between white girls and white boys more often show boys to have the higher scores.

Posttransfer data for the Anxiety scale, shown in Table 9-14, begin to show differences among the three populations similar to those found for the School Anxiety scale. On the fall posttransfer measure, means for the transfer populations are slightly lower than those for the nontransfer and receiving-school groups; on the final posttransfer measure, they are significantly lower. This is seen to result both from diminished anxiety in the transfer group, particularly in grades 2-3, and from small overall pre- to posttransfer increases in the nontransfer and receiving-school means.

When the populations are divided by race and sex, no consistent pattern of differences is evident. At the end of the posttransfer year, a tendency is seen for Negro receiving-school pupils to express less anxiety than Negro pupils in either the transfer or nontransfer groups, but this difference is significant only for boys in grades 4-5. Other significant differences show lower anxiety in white transfer pupils in grades 4-5 than in their nontransfer and receiving-school counterparts; the difference for boys is significant only in the fall measure, while the difference for girls is significant in both posttransfer measures.

As in the pretransfer data, the scores of white pupils tend to be higher than those of Negro pupils, except among girls in the transfer group. There, Negro girls expressed somewhat greater anxiety, on the whole, especially at grades 4-5. White boys continue to show slightly higher means than

Table 9-14. ANXIETY (CQ): POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 1 (Fall)								
2-3:	T	19.7	1.5	3	17.8	3.8	17	16.0	0.0	1	15.7	4.9	23	16.8	4.4	44
	NT	18.1	3.7	28	16.3	3.4	20	17.4	4.1	34	16.1	3.5	36	17.0	3.8	118
	R	17.7	3.6	285	15.4	3.4	7	17.8	3.5	276	16.0	5.1	6	17.7	3.6	574
		F= 0.601			F= 1.333			F= 0.284			F= 0.061			F= 2.690		
4-5:	T	13.4	4.1	5	15.9	2.9	16	13.0	7.6	3	15.0	4.2	10	15.0	3.9	34
	NT	17.8	3.5	35	15.9	3.5	28	17.9	3.9	34	14.0	3.4	24	16.6	3.9	121
	R	16.8	3.4	213	11.0	1.7	3	16.3	3.5	235	14.0	1.5	6	16.5	3.5	457
		F= 3.785*			F= 3.186			F= 4.387*			F= 0.342			F= 3.002*		
								Posttransfer 2 (Spring)								
2-3:	T	18.7	4.7	3	16.6	4.1	13	14.0	1.4	2	15.8	4.2	22	16.2	4.1	40
	NT	19.0	3.7	28	17.3	3.6	19	18.5	3.4	35	17.0	3.3	32	18.0	3.5	114
	R	17.7	3.1	282	14.8	2.5	8	17.8	3.2	271	14.2	5.0	10	17.7	3.2	571
		F= 2.019			F= 1.416			F= 2.121			F= 2.056			F= 4.400*		
4-5:	T	15.6	3.3	5	16.4	2.5	16	12.7	4.9	3	15.6	4.7	10	15.7	3.6	34
	NT	17.4	3.7	34	17.1	2.7	25	18.7	3.0	30	15.7	3.5	23	17.3	3.4	112
	R	17.2	3.3	216	12.2	2.2	5	16.8	3.2	232	12.9	2.0	7	16.9	3.3	460
		F= 0.613			F= 7.458**			F= 7.461**			F= 1.663			F= 3.016*		

white girls, overall; and for the posttransfer year this pattern holds consistently for Negro pupils as well, except in the receiving-school group. In both the transfer and nontransfer groups, Negro boys tended to show slightly greater anxiety than Negro girls, reversing a pretransfer tendency for Negro girls to be slightly more anxious.

The analysis of change scores is reported in Table 9-15. Only two significant changes are reflected in the fall posttransfer measure, showing increased anxiety among white receiving-school girls in grades 2-3, and among white nontransfer boys in grades 4-5. No systematic pattern of change is seen in this measure for the nontransfer and receiving-school subgroups, whereas the transfer subgroups (except for boys in grades 2-3) tended to show slightly diminished anxiety in the fall.

Between fall and spring, transfer pupils in grades 4-5 tended to increase their scores slightly, while those in grades 2-3 showed slight decrements, if anything. Second- and third-grade nontransfer and receiving-school pupils tended to show slightly increased anxiety over this period (except for white receiving-school girls), but only for white nontransfer pupils is the increment significant. At grades 4-5, nontransfer Negroes and white receiving-school pupils tended to increase their fall-to-spring scores, and significantly so in two subgroups, paralleling the general tendency observed in the transfer group at that grade level. Only the white nontransfer pupils failed to show this general tendency; they showed essentially no change from fall to spring.

Net changes for the year are small, but several are significant. They show an increase in anxiety, over the pretransfer level, for white nontransfer pupils and white receiving-school girls at grades 2-3, and for white receiving-school pupils of both sexes and for Negro nontransfer boys at grades 4-5. No significant changes occur in the transfer group; the only noteworthy one is a small overall decrement in anxiety among Negro girls in grades 2-3.

Sarason General Anxiety Scale

As noted earlier (Chap. 3, p. 34), the GASC was administered in connection with a special substudy of anxiety in this population. A more extensive report on that substudy is expected to appear as a separate document. The GASC data are discussed here as they relate to the content of this report.

Table 9-15. CHANGE IN ANXIETY (CQ): PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
							Pretransfer to Posttransfer 1 (Fall)						
2-3:	T	+ 0.7	3.8	3	+ 1.8	5.6	12	- 4.0	0.0	1	- 1.9	5.0	22
	NT	+ 0.4	5.1	25	- 0.7	4.0	17	- 0.1	3.2	30	0.0	6.1	25
	R	+ 0.2	4.4	97	- 1.5	0.7	2	+ 1.3**	3.9	81	--	--	0
4-5:	T	- 2.6	2.3	5	- 0.2	4.1	16	- 1.5	2.1	2	- 1.2	3.9	10
	NT	+ 1.2*	2.8	30	+ 0.8	3.4	24	+ 0.3	2.1	29	- 1.4	3.4	21
	R	+ 0.3	3.6	89	--	--	0	+ 0.5	3.5	74	--	--	0
							Posttransfer 1 to Posttransfer 2 (Spring)						
2-3:	T	- 1.0	5.0	3	- 1.1	3.0	12	- 1.0	0.0	1	0.0	4.6	22
	NT	+ 1.4*	3.1	25	+ 1.8	4.1	17	+ 1.4*	3.2	30	+ 1.0	3.9	25
	R	+ 0.3	3.3	97	+ 1.5	0.7	2	- 0.4	3.2	81	--	--	0
4-5:	T	+ 2.2	1.8	5	+ 0.5	2.8	16	+ 2.0	1.4	2	+ 0.6	4.4	10
	NT	- 0.3	3.3	30	+ 1.4	3.3	24	- 0.1	1.9	29	+ 1.5*	3.0	21
	R	+ 0.6*	2.8	89	--	--	0	+ 0.5	3.0	74	--	--	0
							Pretransfer to Posttransfer 2 (Spring)						
2-3:	T	- 0.3	5.9	3	+ 0.7	6.0	12	- 5.0	0.0	1	- 1.9	4.9	22
	NT	+ 1.7*	3.5	25	+ 1.1	5.5	17	+ 1.4*	3.1	30	+ 0.9	5.3	25
	R	+ 0.5	4.3	97	0.0	0.0	2	+ 0.9*	3.7	81	--	--	0
4-5:	T	- 0.4	2.4	5	+ 0.3	2.8	16	+ 0.5	0.7	2	- 0.6	4.5	10
	NT	+ 0.8	3.2	30	+ 2.1**	3.1	24	+ 0.2	2.1	29	+ 0.1	4.3	21
	R	+ 0.9*	3.3	89	--	--	0	+ 1.1**	2.8	74	--	--	0

Pretransfer data for the GASC are shown in Table 9-16. In contrast to the measures of school-related anxiety discussed above, general anxiety is seen to be significantly higher in the transfer population than in the nontransfer and receiving-school populations. The three populations likewise differed significantly ($p<.01$) in defensiveness (lie scale) scores, not shown here. At grades 2-3, the transfer and nontransfer groups were comparable in defensiveness and scored above the receiving-school group; at grades 4-5, the transfer group scored above both other groups. Thus, if the assumptions underlying the lie scale are valid, the spread between the populations may be somewhat greater than it appears here.

When the populations are divided by race and sex, significant differences are found only for white girls in grades 2-3 and white boys in grades 4-5. In both cases, the means are substantially higher for the transfer pupils. However, the order of means within subgroups does not consistently support that finding.

Within grades and populations, GASC pretransfer scores show no consistent relationship to race as such. However, a tendency is seen among boys for Negro pupils to have the higher means; the same is true for nontransfer girls. Among girls in the transfer and receiving-school groups, on the other hand, white pupils have the higher means. These findings for race stand in contrast to the measures of school anxiety, on which white pupils generally scored higher than Negro pupils of the same sex. A further contrast is evident with respect to sex differences, which were inconsistent in the school anxiety measures but here are both consistent and substantial, showing higher general anxiety among girls.

Posttransfer data for the GASC appear in Table 9-17. The general order of means parallels that of the pretransfer data, and differences continue to be significant in both grade groups. The posttransfer means, however, are consistently lower than the pretransfer means. Posttransfer defensiveness measures failed to differentiate the populations significantly at grades 2-3. At grades 4-5, however, mean defensiveness scores for the transfer and nontransfer groups were significantly higher than those for receiving-school pupils ($p<.01$ for fall, $p<.05$ for spring), again implying a possibly greater spread among the populations at this grade level.

Table 9-16. GENERAL ANXIETY (GASC): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
2-3: T	10.0	7.2	3	14.4	7.6	22	25.0	3.6	4	22.1	5.6	25	18.5	7.7	54
NT	10.8	7.4	31	14.0	6.5	28	15.2	8.1	33	21.0	7.0	38	15.6	8.2	130
R	11.8	6.0	145	17.0	9.1	4	18.2	6.5	148	16.5	2.1	2	15.1	7.0	299
	F= 0.368			F= 0.311			F= 4.995**			F= 0.800			F= 4.915**		
4-5: T	17.7	8.8	6	14.8	7.2	18	19.5	1.3	4	16.5	6.8	11	16.2	6.9	39
NT	9.6	7.3	34	13.0	7.0	35	14.0	7.1	33	18.5	7.1	29	13.6	7.7	131
R	8.3	5.8	102	--	--	0	14.9	6.0	116	11.5	0.7	2	11.8	6.7	220
	F= 6.440**			F= 0.773			F= 1.397			F= 1.169			F= 7.467**		

Table 9-17. GENERAL ANXIETY (GASC): POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls			Total		
		Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
								Posttransfer 1 (Fall)								
2-3:	T	4.0	2.8	2	12.9	5.1	13	30.0	0.0	1	18.6	9.4	22	16.2	8.9	38
	NT	10.4	6.2	28	11.4	5.2	22	15.4	8.3	32	20.1	7.0	31	14.6	7.9	113
	R	7.2	6.1	258	10.5	12.0	2	14.5	7.7	247	--	--	0	10.7	7.8	507
		F= 3.796*			F= 0.394			F= 0.387			F= 0.417			F=17.830**		
4-5:	T	13.0	5.0	5	9.2	6.7	17	22.5	9.2	2	12.2	7.3	10	11.4	7.3	34
	NT	6.6	6.2	32	10.4	7.0	26	10.4	7.0	32	17.0	6.4	26	10.8	7.5	116
	R	5.8	5.3	206	--	--	0	11.9	6.8	226	12.5	2.1	2	9.0	6.9	434
		F= 4.568**			F= 0.286			F= 3.108*			F= 2.132			F= 4.504*		
								Posttransfer 2 (Spring)								
2-3:	T	3.0	4.2	2	12.6	5.0	13	22.5	9.2	2	20.4	8.2	22	17.0	8.5	39
	NT	7.1	6.5	29	10.9	6.0	22	13.0	8.7	34	19.6	6.3	33	13.0	8.4	118
	R	6.8	5.9	277	13.8	5.7	4	13.2	7.6	264	25.2	4.1	5	10.1	7.6	550
		F= 0.424			F= 0.643			F= 1.468			F= 1.428			F=19.187**		
4-5:	T	14.4	6.2	5	9.6	7.5	17	12.7	9.9	3	12.9	8.3	9	11.4	7.7	34
	NT	7.3	6.1	32	10.2	7.4	27	10.0	6.4	30	14.2	8.1	26	10.2	7.3	115
	R	5.6	4.8	211	13.0	4.2	2	10.7	6.8	229	18.0	10.1	3	8.3	6.5	445
		F= 8.742**			F= 0.198			F= 0.283			F= 0.426			F= 6.248**		

Within subgroups, there is considerable variation in the order of means. Three significant differences are found in the fall data: white transfer boys and girls in grades 4-5 show significantly greater anxiety than their receiving-school counterparts, while in grades 2-3 white nontransfer boys score above white transfer and receiving-school boys. Only the difference for fourth- and fifth-grade white boys continues to be significant in the spring data.

Racial differences show a somewhat more consistent pattern in the posttransfer data. In general, Negro pupils score appreciably higher than white pupils of the same sex; the only exceptions occur in some of the transfer subgroups. Sex differences continue to be dramatic, and with one reversal, consistently show girls to have the higher means.

The analysis of GASC change scores is reported in Table 9-18. In keeping with the lower fall means noted earlier, mean changes from the pretransfer to the fall posttransfer assessment are consistently negative, except in a few cells representing only one or two pupils. At grades 2-3, significant decrements are found for Negro transfer girls and for white receiving-school boys and girls. At grades 4-5, significant decrements are found for Negro transfer and nontransfer boys, and for white nontransfer and receiving-school pupils of both sexes. Comparisons of the transfer and nontransfer subgroups show the largest decrements generally occurring among the transfer pupils.

From fall to spring, changes are generally smaller and show no consistent overall direction. Negro transfer pupils, and girls in particular, tend to show slightly increased anxiety over this period, while a continuing downward trend is seen in the corresponding nontransfer subgroups, and in white receiving-school pupils. Decrements for the latter are significant in three of the four subgroups. The only other significant change is a decrement among white nontransfer boys in grades 2-3.

Net changes from the pretransfer measure to the final posttransfer measure are in the direction of reduced anxiety, in all but one very small subgroup. Significant net decrements are seen for all white receiving-school subgroups and for several of the nontransfer subgroups: white boys and Negro girls in grades 2-3, white girls and Negro boys and girls at grades 4-5.

Table 9-18. CHANGE IN GENERAL ANXIETY (GASC): PRE- TO POSTTRANSFER YEAR

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
					Pretransfer to Posttransfer 1 (Fall)								
2-3:	T	- 2.0	0.0	2	- 2.1	6.0	14	+ 1.0	0.0	1	- 3.8*	8.4	23
	NT	- 0.8	6.3	26	- 1.7	6.2	21	- 0.3	6.3	29	- 1.4	7.5	29
	R	- 3.7**	5.9	88	- 9.0	18.4	2	- 3.5**	7.0	93	--	--	0
4-5:	T	- 3.2	7.2	5	- 4.6*	6.5	17	+ 2.0	8.5	2	- 4.0	5.9	9
	NT	- 2.7**	4.8	31	- 2.5**	4.0	25	- 4.6**	6.0	29	- 1.3	5.1	24
	R	- 2.4**	5.2	75	--	--	0	- 3.0**	5.9	86	+ 1.0	1.4	2
					Posttransfer 1 to Posttransfer 2 (Spring)								
2-3:	T	- 1.0	1.4	2	+ 0.5	5.9	14	- 1.0	0.0	1	+ 1.6	7.5	23
	NT	- 4.3**	6.2	26	- 0.2	5.6	21	- 2.7	7.3	29	- 1.6	7.0	29
	R	- 1.3*	5.2	88	+ 1.0	4.2	2	- 2.2**	5.4	93	--	--	0
4-5:	T	+ 1.4	4.8	5	+ 0.4	7.1	17	- 7.5	3.5	2	+ 1.8	3.9	9
	NT	+ 0.5	5.3	31	- 0.1	5.6	25	+ 0.9	7.0	29	- 2.3	6.2	24
	R	- 0.2	3.5	75	--	--	0	- 1.3*	5.8	86	0.0	2.0	2
					Pretransfer to Posttransfer 2 (Spring)								
2-3:	T	- 3.0	1.4	2	- 1.6	8.5	14	0.0	0.0	1	- 2.2	6.4	23
	NT	- 5.1**	7.3	26	- 1.9	5.9	21	- 3.1	9.2	29	- 2.9*	7.5	29
	R	- 5.0**	5.4	88	- 8.0	14.1	2	- 5.7**	7.2	93	--	--	0
4-5:	T	- 1.8	7.1	5	- 4.3	8.5	17	- 5.5	12.0	2	- 2.2	6.4	9
	NT	- 2.2	6.3	31	- 2.6*	5.6	25	- 3.7**	5.0	29	- 3.6*	7.3	24
	R	- 2.6**	5.0	75	--	--	0	- 4.3**	6.6	86	+ 1.0	4.2	2

4. Summary

Pupil perceptions of school climate suggest that during the first year of desegregated schooling, transfer pupils experienced the receiving-school classroom milieu as less supportive than did pupils residing in receiving-school neighborhoods. However, an upward shift in scores from the pretransfer to the posttransfer year suggests further that the transfer pupils saw their new school situation as more supportive than the milieu of the de facto segregated school attended the year before. This posttransfer shift was not evident in the nontransfer group, but it did occur among white receiving-school pupils, raising the possibility that the introduction of a new, predominantly Negro reference group into the receiving schools may have brought new rewards for the white child, in terms of perceived classroom support. Teachers appeared to have a minimal role, if any, in these differing perceptions of school climate. Teacher support for learning was seen as about equally positive by the three populations, both before and after the transfer. In all populations, white pupils -- and white girls in particular -- perceived the greatest degree of supportiveness, in teachers and in the classroom milieu generally.

Transfer pupils generally rated their own behavior in school as less acceptable than nontransfer and receiving-school pupils rated theirs, both before and after the transfer. On the whole, pupils in all three groups tended to view their behavior somewhat more positively at the beginning of the posttransfer year than at the end of the previous year. These slight gains tended to be maintained in all but the transfer group, where they were seen to dissipate by the end of the posttransfer year. In general, white pupils perceived their behavior in school as more acceptable than Negro pupils saw theirs. The same was true for girls compared to boys, the former showing the more positive self-ratings.

The transfer group generally expressed less school-related anxiety than did the nontransfer and receiving-school groups. On one of the scales employed, this difference appeared in both the pretransfer and posttransfer scores. On the other, initially equivalent levels of anxiety in the three populations were altered over the posttransfer year, as a result of diminished anxiety in the transfer group and slightly increased anxiety in the nontransfer and receiving-school groups. At the end of the posttransfer year, consequently, the transfer group scored below the other two groups on both scales. White pupils tended to show greater school-related anxiety than Negro pupils, on both measures. Sex differences were not consistent on either measure.

General anxiety, on the other hand, was consistently higher in the transfer group, both before and after the transfer. On the whole, transfer pupils tended to express less anxiety during the posttransfer year than during their final year in the *de facto* segregated school, but this proved to be a general phenomenon occurring in the nontransfer and receiving-school populations as well. In contrast to the findings for school-related anxiety, general anxiety tended to be higher in Negro pupils than in white pupils. The means for girls were dramatically higher than those for boys.

Chapter 10

BEHAVIOR IN SCHOOL

Reported collectively in this chapter are the findings for teachers' ratings of pupils. As was pointed out in Chapter 3, there are inherent difficulties in the interpretation of subjective ratings as descriptive of actual behavior. These difficulties are compounded in the present study by the absence of a constant rater, or set of raters, for all pupils.

Each teacher can be expected to rate his or her pupils within a frame of reference that is to some extent unique. Where ratings for a number of classes are combined, differences among raters can be expected to cancel out. In the present study, then, there is probably little reason for concern on this score except in the pretransfer ratings for transfer pupils in grades 4-5. These pupils represented two classes in the _de facto_ segregated school; ratings for the group thus reflect the perspectives of only two teachers. In all other instances, ratings for a particular pair of grades represent the judgments of at least four teachers, and in the receiving schools many more than that.

The more difficult problem here is that pre- and posttransfer ratings for a given pupil reflect the judgment of _different_ teachers. This circumstance should not affect the validity of the ratings from any one assessment period, viewed in cross-section, for the reason noted above. It does, however, rule out a clear interpretation of pre- to posttransfer change, which may reflect a change in the child, a different frame of reference on the part of the rater, and additionally for the transfer group, a change in the school context within which his behavior is evaluated.

Because these factors are inextricably confounded in any analysis of pre- to posttransfer change, apparent relationships between pre- and posttransfer findings must be interpreted with caution, and consideration of change scores is limited, with one exception, to the interval between fall and spring of the posttransfer year. Except in a few cases, where teachers left during the year, or children were shifted to a different class or moved to another school involved in the study, both posttransfer ratings for a given child were contributed by the same teacher.

The one measure for which pre- to posttransfer changes are examined is a composite rating of the child's "impact" in his class. For that measure, school context and the teacher's frame of reference are meaningful variants, in that a child's impact has to be evaluated with reference to his particular classroom situation.

The data from teachers' ratings are presented under four major headings, reflecting the content of the four rating scales employed. They are general classroom adjustment, self-satisfaction and aggression, maladaptive behavior, and social stimulus characteristics.

1. General Classroom Adjustment

A measure of general adjustment is provided by the 10-item Coopersmith Behavior Rating Scale, which reflects the following characteristics, some represented by more than one item: adaptability, self-assurance, acceptance by classmates, anxiety, attitude toward accomplishment, and reactions to failure and to criticism. The items are questions -- e.g., "How often is this child chosen for activities by his classmates?" -- which are responded to on a 5-point scale: "always," "usually," "sometimes," "seldom," or "never." The maximum score, indicating optimal adjustment, is 50.

Pretransfer data for rated adjustment, appearing in Table 10-1, show significant differences among the total populations at all grade levels. In grades K-1 and 2-3, mean adjustment ratings for the transfer group are well below those for the nontransfer and receiving-school groups, the latter having similar means. In grades 4-5, the transfer group is rated somewhat above the nontransfer group, and somewhat below the receiving-school group.

When the three populations are divided by race and sex, three significant differences are found in the resulting subgroups. In grades K-1, the mean adjustment rating for Negro receiving-school girls is well below the mean ratings for Negro transfer and nontransfer girls. In grades 4-5, both white and Negro nontransfer boys are rated as less well adjusted than are their counterparts in the transfer and receiving-school groups. With these exceptions, differences within the subgroups are generally small, most following the pattern of differences found among the total populations.

Table 10-1. GENERAL CLASSROOM ADJUSTMENT: PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	35.8	9.6	6	31.3	7.9	26	31.0	13.5	3	31.3	8.2	26	31.7	8.4	61
NT	36.8	8.0	40	33.7	5.1	27	36.5	7.0	36	33.1	6.5	39	35.1	7.0	142
R	35.4	7.3	215	33.6	7.3	8	37.4	7.7	223	24.8	11.3	8	36.2	7.7	454
	F= 0.602			F= 0.927			F= 1.193			F= 3.865*			F= 9.307**		
2-3: T	37.0	9.4	4	29.1	5.2	21	32.0	8.1	4	32.0	6.5	25	31.3	6.5	54
NT	37.0	7.0	31	32.1	6.4	28	38.9	4.8	34	33.2	6.4	39	35.3	6.7	132
R	35.9	7.1	178	34.0	7.1	2	37.1	7.2	174	33.0	0.0	1	36.5	7.1	355
	F= 0.310			F= 1.809			F= 2.227			F= 0.497			F=13.470**		
4-5: T	36.7	6.2	6	35.3	6.9	18	36.2	8.2	4	32.8	6.9	12	34.8	6.8	40
NT	32.9	7.8	34	30.8	5.6	34	36.3	6.6	34	30.4	6.7	28	32.7	7.0	130
R	36.3	7.4	163	33.2	4.8	5	36.5	7.8	162	32.2	7.9	8	36.3	7.6	338
	F= 3.051*			F= 3.398*			F= 0.020			F= 0.559			F=11.183**		

Within populations and grades, the pretransfer adjustment ratings for white pupils are consistently higher than those for Negro pupils of the same sex, except among the transfer girls in grades K-1 and 2-3. There, means for the two racial groups are virtually identical (but the number of white pupils is very small). Among white children, adjustment ratings tend to be higher for boys than girls in the transfer group, and higher for girls than boys in the nontransfer and receiving-school groups. No consistent pattern of sex differences is evident among Negro pupils.

Posttransfer data for rated adjustment are presented in Table 10-2. They show continued significant differences in the total populations at all grade levels, and the same order of means as was seen in the pretransfer data except for the transfer group at grades 4-5. The mean adjustment rating for these pupils, which in the pretransfer year was somewhat higher than the nontransfer mean, dropped in the posttransfer year to a level below the mean rating for the nontransfer group. Thus, in the posttransfer data, the lowest means consistently occur in the transfer group. Except for the lower rating of fourth- and fifth-grade transfer pupils, posttransfer means are very similar to the pretransfer means, at all grade levels and for all three populations. Fall and spring posttransfer means are likewise comparable.

Within the race-sex subgroups, differences are generally small and only three are significant. On the fall posttransfer measure, the rated adjustment of Negro receiving-school girls in grades 2-3 is poorer than that of Negro transfer and nontransfer girls in those grades. (A similar pretransfer finding for Negro girls in grades K-1 is not borne out in the posttransfer data.) On the final posttransfer measure, mean adjustment ratings for the few white transfer girls in grades K-1 and 4-5 are substantially lower than those for their nontransfer and receiving-school counterparts; in both cases, the highest means occur in the nontransfer group. The differences apparent here between white transfer and receiving-school girls reflect a general trend among white girls, showing the rated adjustment of these transfer pupils to be somewhat poorer than the rated adjustment of their white girl classmates in the receiving schools. The very small number of white transfer girls precludes any general interpretation of this trend, but that limitation is less applicable to

Negro boys, who show the same trend. In the latter case, none of the differences is significant, but the consistency of the finding is impressive.

Trends relating to race and sex in the pretransfer data are generally evident in the posttransfer data as well. Adjustment ratings for white pupils tend to be higher, overall, than those for Negro pupils of the same sex. Exceptions again include the K-1 transfer girls and appear here in one or two other subgroups having very small n's for one of the racial groups. Among white pupils, posttransfer adjustment ratings continue to be higher for boys than girls in the transfer group, and higher for girls than boys in the other two groups. Sex differences among Negro pupils still show no consistent pattern.

The analysis of fall-to-spring change scores, for pupils rated during all assessment periods, is reported in Table 10-3. This analysis supports the stability of the population means over that period; the changes are negligible, in most cases. Only one general trend is evident: receiving-school pupils tend to be rated as slightly less well adjusted at the end of the posttransfer year. However, the decrement is significant only for white girls in grades 4-5. The largest fall-to-spring change occurring in a cell of reasonable size is a decrement of a little over 2 points in the rated adjustment of Negro transfer girls at grades 2-3. This decrement is not statistically significant.

2. Self-Satisfaction and Aggression

Global ratings of self-satisfaction and aggression were obtained from the McNeil Teacher's Rating Scale, in which the two characteristics are defined behaviorally and rated on 5-point scales indicating the frequency with which the relevant behaviors are observed. Scores on each of the characteristics range from 1 (never or almost never) to 5 (always or almost always).

Self-Satisfaction

Pretransfer ratings for self-satisfaction are shown in Table 10-4. Significant population differences are found in all grades, but the order of means differs somewhat across grade levels. In grades K-1, the transfer and nontransfer groups have identical means, which are somewhat below the receiving-school mean. In grades 2-3, the transfer group is

Table 10-2. GENERAL CLASSROOM ADJUSTMENT: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	34.8	6.1	5	32.0	4.6	19	28.0	0.0	1	33.2	8.2	20	32.7	6.5	45
NT	38.9	7.0	37	32.4	7.0	19	37.5	6.1	32	33.2	6.5	29	36.1	7.1	117
R	36.6	7.7	289	37.2	6.8	10	37.5	7.7	275	35.0	9.8	8	37.0	7.7	582
	F= 1.642			F= 2.698			F= 0.0			F= 0.193			F= 7.124**		
2-3: T	34.7	9.3	3	28.8	8.5	17	37.0	0.0	1	35.9	7.5	23	33.1	8.5	44
NT	34.8	8.6	28	30.5	5.9	21	37.0	6.1	33	33.1	5.2	35	34.1	6.8	117
R	36.7	7.5	290	35.3	8.7	7	38.6	6.4	278	26.0	10.0	7	37.5	7.2	582
	F= 0.915			F= 1.900			F= 1.853			F= 5.983**			F=16.102**		
4-5: T	35.8	10.0	5	32.2	5.7	16	31.7	5.5	3	28.1	6.3	10	31.5	6.8	34
NT	33.9	8.7	35	31.7	7.9	28	39.0	5.6	34	29.3	6.3	24	33.9	8.0	121
R	36.2	6.6	216	37.7	5.1	3	37.2	6.3	239	35.3	3.6	6	36.7	6.4	464
	F= 1.580			F= 0.952			F= 2.591			F= 3.063			F=15.368**		

(table continued below)

Table 10-2 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	34.2	2.8	4	31.9	7.3	15	25.5	6.4	2	34.6	7.2	19	33.1	7.0	40
NT	37.3	7.5	35	31.6	6.3	19	38.6	6.5	34	34.6	6.6	27	36.1	7.2	115
R	36.1	7.8	278	34.1	8.9	12	37.3	7.5	267	36.4	8.7	8	36.6	7.7	565
	F= 0.541			F= 0.455			F= 3.067*			F= 0.219			F= 4.161*		
2-3: T	36.0	11.4	3	28.6	5.9	14	35.0	4.2	2	34.1	7.9	22	32.4	7.7	41
NT	35.8	6.7	28	30.9	5.6	20	37.5	5.8	35	32.2	5.6	32	34.4	6.4	115
R	36.1	7.1	286	35.1	8.8	8	38.0	7.3	273	30.9	8.9	10	36.9	7.3	577
	F= 0.037			F= 2.628			F= 0.243			F= 0.873			F=11.651**		
4-5: T	35.6	7.6	5	32.1	7.6	16	28.0	5.2	3	29.8	5.3	10	31.6	6.9	34
NT	33.1	8.0	34	30.7	9.4	25	39.5	6.0	30	28.4	7.3	23	33.3	8.7	112
R	35.8	7.5	218	30.8	3.0	5	36.8	6.8	234	30.1	5.8	7	36.1	7.2	464
	F= 1.794			F= 0.138			F= 4.837**			F= 0.255			F=11.187**		

Table 10-3. CHANGE IN GENERAL CLASSROOM ADJUSTMENT: POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+ 0.8	5.5	4	+ 0.1	6.2	14	+ 2.0	0.0	1	+ 0.9	4.2	19
NT	- 1.3	3.9	29	- 1.1	4.6	18	+ 0.2	5.6	29	+ 1.6	5.3	26
R	- 0.4	6.3	103	- 5.8	5.8	6	- 0.6	5.8	122	- 2.7	2.3	3
2-3: T	+ 1.3	2.1	3	- 1.1	6.6	14	+ 1.0	0.0	1	- 2.3	5.5	22
NT	+ 0.4	4.1	25	+ 1.2	4.1	18	+ 1.2	4.8	30	- 1.2	5.3	28
R	+ 0.1	5.8	128	- 9.0	0.0	1	- 0.1	4.9	129	+10.0	0.0	1
4-5: T	- 0.2	5.9	5	- 0.1	4.7	16	+ 2.0	4.2	2	+ 1.7	4.6	10
NT	- 0.2	4.9	30	- 1.6	6.4	24	- 0.4	5.2	29	- 0.4	5.4	21
R	- 0.6	5.1	92	- 8.5	2.1	2	- 1.6**	4.7	100	- 1.0	8.5	3

Table 10-4. SELF-SATISFACTION: PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	4.0	1.5	6	3.5	1.4	24	4.5	0.6	4	3.5	1.3	26	3.6	1.3	60
NT	3.7	0.9	37	3.6	0.7	27	3.9	0.9	36	3.4	0.8	35	3.6	0.9	135
R	4.1	0.9	211	4.0	1.0	3	4.2	0.9	215	4.0	1.0	3	4.1	0.9	432
	F= 1.852			F= 0.243			F= 3.032*			F= 0.488			F=18.958**		
2-3: T	3.5	1.7	4	2.8	0.7	21	3.5	1.3	4	3.6	0.9	25	3.3	1.0	54
NT	4.1	0.8	31	3.5	1.0	27	4.2	0.9	33	3.7	0.9	38	3.9	0.9	129
R	3.9	1.0	176	3.6	1.1	9	4.3	0.9	181	3.8	1.5	4	4.1	1.0	370
	F= 0.627			F= 4.185*			F= 1.665			F= 0.213			F=17.462**		
4-5: T	4.0	0.6	6	3.9	1.0	18	3.8	0.5	4	3.8	1.1	12	3.8	0.9	40
NT	3.5	1.2	33	3.0	0.9	34	3.7	1.1	34	3.1	0.8	28	3.3	1.0	129
R	3.8	1.0	148	4.2	0.8	5	4.1	0.9	151	3.5	0.9	8	3.9	1.0	312
	F= 1.174			F= 7.215**			F= 2.876			F= 2.483			F=16.912**		

rated well below the other two groups, whose means are similar. In grades 4-5, means for the transfer and receiving-school groups are comparable, and well above the nontransfer mean.

Within the subgroups, three significant differences are found. One occurs among white girls in grades K-1, who depart from the general pattern at that grade level: the mean self-satisfaction rating is highest for the four transfer pupils. The other significant differences occur among Negro boys in grades 2-3 and 4-5, where the mean differences generally conform to the same pattern seen for the total populations in those grades.

Within populations and grades, self-satisfaction tends to be rated as somewhat greater in white pupils than in Negro pupils of the same sex. Among white pupils, mean ratings tend to be slightly higher for girls than for boys; among Negro pupils, sex differences are negligible, on the whole, and show no consistent pattern.

Posttransfer ratings for self-satisfaction are presented in Table 10-5. Significant population differences are again seen at all grade levels, for both posttransfer ratings, but the pattern of means is shifted to the more familiar one in this report: lowest means in the transfer group, highest means in the receiving-school group. The fall posttransfer means show a drop from the pretransfer level for transfer pupils in grades K-1 and 4-5. In the latter group, the lower mean is sustained over the year; in the former group, it is compensated subsequently. The only other noteworthy difference from the pretransfer values is the lower mean rating seen in the fall for the nontransfer group; it, too, is compensated in the spring measure.

Among the subgroups, significant differences are seen in the fall ratings for K-1 Negro boys, and in the spring ratings for white girls in the same grades and Negro boys in grades 2-3. All show the mean self-satisfaction ratings for the transfer pupils to be substantially below those for receiving-school pupils, and in some cases below the nontransfer means as well. On the whole, that pattern is seen in most subgroups, except among Negro girls.

As with the pretransfer data, teachers tended to rate white pupils higher on self-satisfaction than Negro pupils of the same sex -- with the exception, here, of receiving-school boys, whose means are about the same in the two racial groups. White girls tend to have higher mean ratings than white boys, as a rule, while no consistent sex differences are found in the ratings of Negro pupils.

The analysis of fall-to-spring changes in rated self-satisfaction is reported in Table 10-6. Mean changes are generally very small, reflecting the limited span of a 5-point scale; in several subgroups, principally among the girls, fall-to-spring differences average to zero. Significant gains are seen for Negro transfer boys and Negro nontransfer girls in grades K-1, and for white receiving-school boys and girls in grades 4-5. In general, similar patterns of change are seen for transfer and receiving-school pupils within subgroups; exceptions all involve a limited number of cases in one population or the other.

Aggression

Pretransfer data for rated aggression appear in Table 10-7. Consistently, mean aggression ratings for the transfer group are somewhat higher than those for the receiving-school group, and in the lower grades somewhat above the nontransfer means as well. The differences are significant only for grades 2-3 and 4-5; in the latter group, the transfer and nontransfer means are comparable.

When race and sex are taken into account, differences within subgroups are not consistent in direction. Among the boys, mean aggression ratings for transfer pupils are most often as low as, or lower than, mean ratings for the receiving-school pupils (and in some cases the nontransfer pupils as well). In two subgroups -- white boys in grades K-1, and Negro boys in grades 4-5 -- the rated aggression of receiving-school pupils is significantly greater than that of their transfer and nontransfer counterparts. No consistent pattern is seen among the girls; the one significant difference, at grades 2-3, shows white nontransfer girls rated as considerably less aggressive than white transfer and receiving-school girls. Means for the latter two groups do not differ appreciably.

Within populations and grades, Negro children in nearly every instance were rated more aggressive than white children of the same sex. Predictably, boys were generally seen as more aggressive than their female racial counterparts.

Posttransfer data for rated aggression are shown in Table 10-8. Significant population differences occur at all grade levels, for both posttransfer measures, generally showing

Table 10-5. SELF-SATISFACTION: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	3.0	0.7	5	3.0	1.1	19	4.0	0.0	1	3.6	1.1	20	3.3	1.1	45
NT	3.9	0.9	37	3.1	1.1	19	3.9	0.8	32	3.2	0.8	29	3.6	0.9	117
R	3.9	1.0	289	4.0	0.8	10	4.2	0.9	275	3.6	1.2	8	4.1	1.0	582
	F= 2.295			F= 3.610*			F= 3.202			F= 1.248			F=21.013**		
2-3: T	3.0	1.0	3	2.8	1.3	17	3.0	0.0	1	3.5	1.2	23	3.2	1.2	44
NT	3.7	1.2	28	2.9	1.0	21	4.0	1.0	33	3.3	1.2	35	3.5	1.2	117
R	3.8	1.0	289	3.9	0.9	7	4.1	0.9	278	2.9	1.2	7	3.9	1.0	581
	F= 0.874			F= 2.398			F= 0.165			F= 0.855			F=14.780**		
4-5: T	3.8	0.8	5	3.1	0.9	16	3.0	0.0	3	2.9	0.7	10	3.1	0.8	34
NT	3.3	1.3	35	3.1	1.1	28	3.9	0.8	34	3.1	1.1	24	3.4	1.1	121
R	3.6	0.9	216	3.7	0.6	3	3.8	0.9	239	3.5	0.5	6	3.7	0.9	464
	F= 1.665			F= 0.473			F= 1.258			F= 0.784			F=10.973**		

(table continued below)

Table 10-5 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	3.5	0.6	4	3.6	1.1	15	3.0	0.0	2	3.8	0.9	19	3.6	0.9	40
NT	3.8	1.1	35	3.2	1.1	19	3.9	0.8	34	3.5	0.8	27	3.7	1.0	115
R	3.9	1.0	278	3.4	1.0	12	4.2	0.9	267	4.0	0.8	8	4.0	0.9	565
	F= 0.514			F= 0.555			F= 3.053*			F= 1.243			F= 8.863**		
2-3: T	3.7	1.5	3	2.7	0.8	14	3.0	0.0	2	3.6	1.1	22	3.3	1.1	41
NT	3.8	1.0	28	3.0	0.9	20	4.2	0.9	35	3.7	1.0	32	3.8	1.0	115
R	3.8	1.0	286	3.9	1.2	8	4.0	1.0	273	3.5	1.1	10	3.9	1.0	577
	F= 0.055			F= 3.900*			F= 1.754			F= 0.087			F= 5.778**		
4-5: T	3.2	1.1	5	2.8	1.0	16	3.7	1.2	3	2.9	1.0	10	3.0	1.0	34
NT	3.4	1.1	34	3.2	1.0	25	4.1	0.8	30	3.2	0.9	23	3.5	1.0	112
R	3.6	1.0	218	3.6	0.5	5	3.9	0.9	234	2.7	0.5	7	3.8	1.0	464
	F= 1.404			F= 1.392			F= 0.586			F= 0.838			F=12.849**		

Table 10-6. CHANGE IN SELF-SATISFACTION: POSTTRANSFER 1 (Fall) to POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+ 0.8	0.5	4	+ 0.6*	0.9	14	- 1.0	0.0	1	+ 0.1	0.7	19
NT	- 0.1	0.9	27	- 0.1	0.8	18	- 0.1	0.6	28	+ 0.3**	0.5	24
R	0.0	1.0	128	+ 0.3	1.5	3	- 0.1	1.0	132	0.0	0.0	1
2-3: T	+ 0.7	0.6	3	- 0.3	1.3	14	0.0	0.0	1	0.0	0.9	22
NT	+ 0.1	0.8	25	+ 0.1	0.7	17	+ 0.4	1.1	29	+ 0.3	1.1	28
R	+ 0.1	0.8	97	- 0.3	2.1	3	0.0	1.0	101	0.0	0.0	1
4-5: T	- 0.6	0.5	5	- 0.2	0.9	16	+ 1.0	1.4	2	0.0	0.6	10
NT	0.0	1.0	29	+ 0.1	1.0	24	+ 0.1	0.6	29	0.0	0.9	21
R	+ 0.1*	0.7	91	+ 0.5	0.7	2	+ 0.3**	1.0	82	- 0.7	0.6	3

Table 10-7. AGGRESSION: PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	2.3	1.5	6	2.7	1.3	25	1.5	1.0	4	2.3	1.2	26	2.4	1.3	61
NT	2.0	1.0	37	2.8	1.3	26	1.9	1.0	36	2.2	1.0	35	2.2	1.1	134
R	2.6	1.1	210	2.0	1.7	3	1.8	1.0	216	1.7	0.6	3	2.2	1.1	432
	F= 4.296*			F= 0.477			F= 0.400			F= 0.442			F= 1.441		
2-3: T	2.2	1.9	4	2.9	1.3	21	2.0	1.4	4	2.5	1.3	25	2.6	1.4	54
NT	2.3	1.2	31	2.6	1.2	25	1.4	0.7	34	2.1	1.1	36	2.0	1.1	126
R	2.3	1.1	178	3.0	1.6	9	1.8	0.9	180	2.0	1.2	4	2.0	1.1	371
	F= 0.002			F= 0.579			F= 3.099*			F= 1.120			F= 6.457**		
4-5: T	1.5	0.8	6	2.7	1.3	18	1.5	1.0	4	2.6	1.3	12	2.4	1.3	40
NT	2.2	1.0	34	3.1	1.0	34	1.4	0.7	34	2.5	1.0	28	2.3	1.1	130
R	2.4	1.2	147	4.0	1.0	5	1.6	0.9	151	3.0	1.3	8	2.0	1.2	311
	F= 1.692			F= 3.001*			F= 0.775			F= 0.719			F= 3.073*		

Table 10-8. AGGRESSION: POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	2.4	0.5	5	3.1	1.2	19	3.0	0.0	1	2.2	1.0	20	2.6	1.1	45
NT	2.1	1.2	37	3.4	1.2	19	1.5	0.9	32	1.9	1.1	29	2.1	1.3	117
R	2.1	1.0	289	2.4	1.1	10	1.5	0.8	275	2.0	1.1	8	1.8	1.0	582
	F= 0.260			F= 2.302			F= 0.012			F= 0.372			F=15.964**		
2-3: T	1.7	1.2	3	3.2	1.1	17	2.0	0.0	1	2.4	1.3	23	2.7	1.3	44
NT	2.0	1.0	28	2.7	1.1	21	1.5	0.8	33	2.3	1.1	35	2.1	1.1	117
R	1.9	1.1	290	2.4	1.4	7	1.3	0.7	279	2.6	1.3	7	1.7	1.0	583
	F= 0.219			F= 1.635			F= 0.652			F= 0.233			F=23.966**		
4-5: T	1.8	1.1	5	1.9	0.8	16	1.3	0.6	3	2.0	0.9	10	1.9	0.8	34
NT	2.2	1.2	35	2.8	1.3	28	1.4	1.0	34	2.3	1.2	24	2.1	1.3	121
R	2.0	1.0	216	2.0	0.0	3	1.4	0.8	239	1.8	1.2	6	1.7	0.9	464
	F= 0.624			F= 3.149			F= 0.022			F= 0.593			F= 9.197**		

(table continued below)

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Table 10-8 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	3.2	1.0	4	3.4	1.2	15	2.5	2.1	2	2.0	1.1	19	2.7	1.3	40
NT	2.0	1.2	35	3.3	1.2	19	1.7	1.1	34	2.0	1.0	27	2.1	1.3	115
R	2.2	1.1	278	2.8	1.2	12	1.5	0.9	267	1.9	0.8	8	1.9	1.1	565
	F= 2.106			F= 0.860			F= 1.456			F= 0.053			F=11.382**		
2-3: T	2.0	1.7	3	2.9	1.0	14	1.0	0.0	2	2.6	1.3	22	2.6	1.2	41
NT	2.0	1.2	28	2.9	1.4	20	1.6	0.8	35	2.3	1.2	32	2.1	1.2	115
R	2.1	1.1	286	2.9	1.4	8	1.5	0.8	273	1.9	1.2	10	1.8	1.0	577
	F= 0.006			F= 0.005			F= 0.927			F= 1.328			F=15.434**		
4-5: T	2.2	1.1	5	2.6	1.1	16	1.0	0.0	3	2.5	1.2	10	2.4	1.1	34
NT	2.2	1.1	34	2.7	1.4	25	1.2	0.7	30	2.4	0.9	23	2.1	1.2	112
R	2.1	1.0	218	3.0	0.7	5	1.5	0.9	234	2.9	1.1	7	1.8	1.0	464
	F= 0.267			F= 0.240			F= 2.235			F= 0.483			F= 6.469**		

the highest rated aggression in the transfer group, followed in order by the nontransfer and receiving-school groups. An exception in the fall posttransfer measure shows the transfer mean slightly below the nontransfer mean; both, however, exceed the receiving-school mean.

Generally, the fall population means do not differ appreciably from the pretransfer means. Fourth- and fifth-grade pupils in all groups were rated somewhat lower in aggression in the fall, with the transfer group showing the largest decrement. A look at the subgroup means indicates that this decrement is largely attributable to lower aggression ratings for the Negro pupils. The fall means for receiving-school pupils at all grade levels are somewhat below the pretransfer means. One wonders if this may be a contrast phenomenon, reflecting the presence of a new reference group -- the transfer pupils -- in the receiving-school classes.

Little difference is seen between the fall and spring population means, with the exception of the transfer group at grades 4-5. For this group, rated aggression is considerably higher in the spring (paralleling the pretransfer mean).

No significant posttransfer differences are seen in the subgroups. The pretransfer trend showing equivalent or lower ratings for transfer boys, relative to receiving-school boys, is generally evident here for white boys. For Negro boys, however, and for girls of both races, the order of means within the subgroups shows little consistency.

Race-sex differences within grades and populations parallel those seen in the pretransfer data: Negro pupils are generally rated more aggressive than white pupils of the same sex, and boys more aggressive than girls of the same race.

Fall-to-spring changes for pupils rated on both occasions are reported in Table 10-9. The only significant change is an increase in rated aggression among Negro transfer boys in grades 4-5. However, in most subgroups slight increments are seen for the transfer pupils, with smaller increments (if any) in the corresponding receiving-school pupils. The only exception worth noting occurs among Negro transfer boys in grades 2-3, who show a slight decrement in rated aggression from fall to spring. Essentially no change is seen in the nontransfer group over that period.

Table 10-9. CHANGE IN AGGRESSION: POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+ 0.8	1.0	4	+ 0.4	0.8	14	+ 1.0	0.0	1	- 0.1	0.6	19
NT	- 0.1	0.9	27	0.0	0.6	18	+ 0.1	0.5	28	0.0	1.0	24
R	+ 0.1	0.9	127	+ 0.3	1.5	3	+ 0.1	1.0	132	0.0	0.0	1
2-3: T	+ 0.3	2.5	3	- 0.4	1.2	14	- 1.0	0.0	1	+ 0.3	1.0	22
NT	- 0.1	0.7	25	+ 0.1	1.1	15	+ 0.2	0.7	30	0.0	0.9	27
R	+ 0.1	0.8	99	+ 0.7	0.6	3	+ 0.1	0.7	100	- 1.0	0.0	1
4-5: T	+ 0.4	0.9	5	+ 0.6**	0.8	16	- 0.5	0.7	2	+ 0.5	1.0	10
NT	- 0.1	0.7	30	0.0	0.6	24	0.0	0.8	29	0.0	1.1	21
R	0.0	0.7	90	+ 0.5	0.7	2	0.0	0.6	82	+ 0.3	0.6	3

3. Maladaptive Behavior

Ratings of maladaptive behavior were obtained from the Quay Symptomatic Behavior Rating Scale, a behavior checklist in which 66 descriptive words or phrases are rated "0" (no problem for this child), "1" (mild problem), or "2" (severe problem). The score on each item contributes to one of the eight factor-based scales derived from the instrument. Maximum score for each factor scale is twice the number of component items; the higher the score, the more maladaptive the behavior, as viewed by the teacher. The scales, the number of items for each, and examples of those items are listed below.

Factor 1 (deceit), 3 items: "cheats," "lies," "steals"

Factor 2 (organic-psychotic manifestations), 6 items: "poorly coordinated," "peculiar ideas," "destructive"

Factor 3 (neurotic behavior), 8 items: "feelings of inferiority," "easily upset," "self-conscious, easily embarrassed"

Factor 4 (immaturity), 5 items: "is a scapegoat," "prefers to play with younger children," "overly affectionate"

Factor 5 (distractibility), 11 items: "short attention span," "disorganized in work," "irresponsible, undependable"

Factor 6 (aggression), 15 items: "threatens others physically," "angers easily," "defiant of authority, disobedient"

Factor 7 (passivity), 8 items: "won't compete," "shy" "daydreams excessively"

Factor 8 (values[1]), 10 items: "dishonest," "unfair," "insincere"

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[1] Defined as observable evidence of superego influence on behavior.

It is perhaps worth noting here, for any who might wish to consider this instrument for their own research, that the Quay scale brought complaints from a number of Ann Arbor teachers. The items are negatively toned, in that they describe maladaptive behaviors. To consider and rate each child within this negative framework, without an opportunity to point out simultaneously his positive attributes, was an uncomfortable experience for many teachers.

Correlations among the 8 factor scales are consistently positive, with a single exception significant, and of variable magnitude. The largest correlations -- .77, .75, and .77 for the three assessment periods -- are those found between Factors 1 and 8. The smallest -- .01 (not significant), .07, and .12 -- are those between Factors 6 and 7. To give some idea of general magnitude, only 8 pairs of scales[1] (of the 28 pairs representing all possible pairings) show correlations as great as .50 for any assessment period.

Despite the considerable independent variance in most of the Quay factor scales, there are some common threads running through the data for all or most of them. To state these at the outset is to eliminate a certain amount of repetition in the discussion of the individual scales. First, to the extent that the Quay ratings accurately reflect maladaptive behavior, it can be said that the occurrence of such behavior was most prominent in the transfer group, and generally least prominent in the receiving-school group, both before and after the transfer. A second general finding is that Negro pupils were seen as exhibiting maladaptive behavior to a greater extent than white pupils of the same sex, both before and after the transfer. A third general finding is a tendency for boys to be rated higher in maladaptive behavior than girls of the same race, both before and after the transfer. Exceptions to these general trends will be noted as the individual scales are considered.

Quay Factor 1 (Deceit)

Pretransfer data for Factor 1 are shown in Table 10-10. Population differences are in accord with the

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[1] Factors 1-6, 1-8, 3-4, 3-7, 5-6, 5-7, 5-8, and 6-8.

Table 10-10. QUAY FACTOR 1 (Deceit): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	0.3	0.8	6	0.7	1.2	26	0.0	0.0	3	0.7	1.0	26	0.7	1.0	61
NT	0.1	0.4	40	0.9	1.2	27	0.3	0.9	37	0.6	1.1	39	0.5	1.0	143
R	0.6	1.1	248	0.3	0.6	3	0.4	0.9	189	0.0	0.0	1	0.5	1.0	441
	F= 4.681*			F= 0.422			F= 0.363			F= 0.113			F= 0.834		
2-3: T	0.5	1.0	4	0.8	1.0	21	0.2	0.5	4	0.9	1.1	25	0.8	1.0	54
NT	0.3	0.6	31	0.5	1.0	28	0.1	0.4	34	1.0	1.7	39	0.5	1.1	132
R	0.3	0.8	186	1.8	1.6	9	0.3	0.7	189	1.3	1.5	3	0.3	0.8	387
	F= 0.156			F= 4.773*			F= 0.729			F= 0.102			F= 6.469**		
4-5: T	0.0	0.0	6	0.8	1.1	18	0.0	0.0	4	0.7	1.0	12	0.6	1.0	40
NT	0.1	0.4	34	0.5	0.8	34	0.1	0.4	34	0.6	1.1	28	0.3	0.8	130
R	0.1	0.3	104	--	--	0	0.1	0.4	121	--	--	0	0.1	0.3	225
	F= 0.798			F= 1.595			F= 0.205			F= 0.025			F=14.129**		

general finding described above, but they are significant only at grades 2-3 and 4-5, and they are not evident with any consistency when race and sex are taken into account.

Significant differences are seen in only two subgroups (white boys in grades K-1, Negro boys in grades 2-3); in both cases, receiving-school pupils have the highest means, nontransfer pupils the lowest. No consistent trends are evident across subgroups, although means for the white transfer pupils tend to be slightly lower than the corresponding receiving-school means.

Differences between white and Negro pupils parallel the general finding for race. Where sex differences occur, boys more often have the higher mean. Consistently at grades 4-5, however, and in one or two cases elsewhere, the means for boys and girls of the same race are about the same.

Posttransfer data for Quay Factor 1, appearing in Table 10-11, show essentially the same relationship among the populations as the pretransfer data. Here, significant differences are found at all grade levels, for both posttransfer measures.

In general, the fall posttransfer means differ little from the pretransfer means. The largest difference occurs in the transfer group at grades 4-5, where the fall mean is considerably lower, reflecting marked decreases in the mean ratings of Negro pupils. Somewhat lower fall means are likewise seen in the receiving-school group at grades K-1 and 2-3, and in the nontransfer group at grades 2-3. Differences between fall and spring posttransfer means occur primarily in the transfer group, where the spring means are somewhat higher at all grade levels and substantially so in grades K-1. These higher means reflect consistently higher spring ratings for the Negro transfer pupils, and in some cases for the white transfer pupils as well. The K-1 increase puts the final posttransfer mean for that group well above the pretransfer mean.

Within the subgroups, the only significant difference shows the K-1 white transfer boys rated higher than their nontransfer and receiving-school counterparts on the final posttransfer measure. A trend in the same direction is evident among Negro transfer boys in all grades, and consistently so in relation to the ratings of their Negro classmates in the receiving schools.

Table 10-11. QUAY FACTOR 1 (Deceit): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	0.6	1.3	5	0.3	1.5	19	2.0	0.0	1	0.9	1.4	20	0.8	1.4	45
NT	0.3	0.7	37	1.1	1.5	19	0.1	0.3	32	1.1	1.4	29	0.6	1.1	117
R	0.2	0.6	289	0.0	0.0	10	0.2	0.6	275	1.0	1.8	8	0.2	0.6	582
	F= 0.884			F= 2.238			F= 0.685			F= 0.118			F=21.352**		
2-3: T	0.3	0.6	3	0.9	1.4	17	0.0	0.0	1	0.5	0.9	23	0.7	1.1	44
NT	0.1	0.4	28	0.2	0.8	21	0.1	0.3	33	0.6	1.1	35	0.3	0.8	117
R	0.1	0.5	290	0.3	0.8	7	0.1	0.4	279	0.9	1.5	7	0.1	0.5	583
	F= 0.225			F= 2.208			F= 0.048			F= 0.270			F=19.747**		
4-5: T	0.0	0.0	5	0.2	0.6	16	0.0	0.0	3	0.2	0.4	10	0.2	0.5	34
NT	0.1	0.4	35	0.2	0.5	28	0.1	0.2	34	0.7	1.4	24	0.2	0.7	121
R	0.1	0.5	217	0.0	0.0	3	0.1	0.4	239	0.0	0.0	6	0.1	0.4	465
	F= 0.222			F= 0.284			F= 0.128			F= 1.419			F= 3.061*		

(table continued below)

Table 10-11 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
Posttransfer 2 (Spring)															
K-1: T	2.0	0.8	4	1.4	1.8	15	0.0	0.0	2	1.2	1.5	19	1.3	1.6	40
NT	0.3	0.9	35	1.3	1.5	19	0.3	0.7	34	1.1	1.5	27	0.7	1.2	115
R	0.4	1.0	278	0.3	0.7	12	0.3	0.8	268	1.6	1.9	8	0.4	0.9	566
	F= 5.495**			F= 2.116			F= 0.146			F= 0.309			F=16.381**		
2-3: T	0.0	0.0	3	1.3	2.2	14	0.0	0.0	2	0.9	1.3	22	0.9	1.6	41
NT	0.1	0.4	28	0.6	1.0	20	0.1	0.2	35	0.8	1.3	32	0.3	0.9	115
R	0.2	0.7	286	0.8	1.8	8	0.1	0.5	273	0.7	1.1	10	0.2	0.6	577
	F= 0.904			F= 0.854			F= 0.705			F= 0.114			F=17.126**		
4-5: T	0.0	0.0	5	0.5	0.7	16	0.3	0.6	3	0.6	1.1	10	0.4	0.8	34
NT	0.3	0.9	34	0.3	0.6	25	0.1	0.4	30	0.8	1.4	23	0.3	0.9	112
R	0.2	0.6	218	0.4	0.9	5	0.2	0.6	234	0.9	1.1	7	0.2	0.6	464
	F= 0.488			F= 0.507			F= 0.321			F= 0.122			F= 4.202*		

Race and sex differences generally support those found in the pretransfer data, except that among Negro pupils, the higher posttransfer means are more often found for girls than for boys.

Fall-to-spring changes in Factor 1 ratings are reported in Table 10-12. No consistent pattern of change is seen within the white subgroups, although significant increases are seen at grades K-1 for white receiving-school boys, and white nontransfer girls. Negro transfer subgroups tended to show a small increase from fall to spring; the increase is significant for boys in grades K-1. A trend in the same direction is apparent in the Negro nontransfer subgroups, but the increments there are even smaller. Receiving-school subgroups generally showed little change over the year, although a small increment for white boys in grades K-1 is statistically significant.

Quay Factor 2 (Organic-Psychotic Manifestations)

Pretransfer data for Factor 2 are shown in Table 10-13. The general finding for population means (T>NT>R) holds here at grades 4-5; at the earlier grade levels, the highest means likewise occur in the transfer group, but the nontransfer means are slightly below the receiving-school means. Significant differences occur at all grade levels.

Within subgroups, transfer pupils consistently have the highest means except among Negro boys in grades 2-3, where the receiving-school mean is highest. Mean differences are significant in that subgroup, and among Negro boys in grades K-1, Negro girls in grades 4-5, and white girls in grades 2-3. In the latter three instances, the transfer means are considerably above the means for the other groups.

The general findings for race and sex apply here, on the whole. A notable exception occurs in grades K-1, where the means for white boys in all three populations are slightly higher than the means for Negro boys.

Posttransfer data for Quay Factor 2, presented in Table 10-14, conform to the general finding for population means only at grades K-1. At the other grade levels, means for the three populations are comparable, in both posttransfer measures.

A striking departure from the pretransfer ratings occurs in the transfer group, where the fall posttransfer means are

Table 10-12. CHANGE IN QUAY FACTOR 1 (Deceit): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+ 1.2	1.7	4	+ 0.8*	1.3	14	- 2.0	0.0	1	+ 0.2	1.2	19
NT	- 0.1	0.7	29	+ 0.2	1.2	18	+ 0.2*	0.5	29	- 0.1	1.2	26
R	+ 0.2*	0.9	134	0.0	0.0	3	+ 0.1	0.7	93	0.0	0.0	1
2-3: T	- 0.3	0.6	3	+ 0.6	1.3	14	0.0	0.0	1	+ 0.4	1.2	22
NT	0.0	0.5	25	+ 0.4	1.1	18	0.0	0.2	30	+ 0.2	1.4	28
R	0.0	0.5	99	+ 1.5	2.1	2	0.0	0.4	118	0.0	0.0	0
4-5: T	0.0	0.0	5	+ 0.2	0.8	16	+ 0.5	0.7	2	+ 0.4	1.0	10
NT	+ 0.2	0.7	30	+ 0.1	0.5	24	+ 0.1	0.4	29	+ 0.1	0.8	21
R	0.0	0.3	68	0.0	0.0	0	+ 0.1	0.5	68	0.0	0.0	0

Table 10-13. QUAY FACTOR 2 (Organic-Psychotic Manifestations): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	2.7	2.5	6	2.4	2.2	26	0.7	1.2	3	1.5	2.4	26	2.0	2.3	61
NT	1.0	1.3	40	0.6	1.2	27	0.5	1.1	37	0.7	1.3	39	0.7	1.2	143
R	1.4	1.9	248	0.0	0.0	3	0.4	0.9	189	0.0	0.0	1	0.9	1.6	441
	F= 2.247			F= 7.499**			F= 0.568			F= 3.016			F=12.890**		
2-3: T	1.0	0.8	4	2.2	2.5	21	1.5	3.0	4	0.7	1.2	25	1.4	2.0	54
NT	0.7	1.6	31	0.9	1.1	28	0.1	0.4	34	0.4	1.1	39	0.5	1.1	132
R	0.9	1.4	186	3.0	2.4	9	0.4	0.8	189	0.7	1.2	3	0.7	1.3	387
	F= 0.119			F= 5.043**			F= 4.548*			F= 0.488			F= 7.857**		
4-5: T	0.7	1.0	6	1.0	1.9	18	0.8	0.5	4	1.8	1.8	12	1.2	1.7	40
NT	0.3	0.7	34	0.7	1.2	34	0.4	0.9	34	0.5	1.0	28	0.5	1.0	130
R	0.4	0.9	104	--	--	0	0.2	0.5	121	--	--	0	0.3	0.7	225
	F= 0.498			F= 0.380			F= 2.500			F= 8.865**			F=16.018**		

substantially lower at all grade levels. These differences are reflected in all but two of the transfer subgroups: Negro girls in grades K-1, who were rated about the same in the fall, and the few white boys in grades 4-5, whose fall mean was slightly higher than their pretransfer mean. From fall to spring, essentially no change is seen in the population means.

The substantial posttransfer drop in means for the transfer group is a curious finding, in that it is not readily explained as a consequence of change in the children or of change in the school context within which they were rated. The more serious behavior manifestations reflected in the Factor 2 scale -- poor coordination, destructive tendencies, symptoms of thought disorder -- are not generally transitory. On the other hand, to assume their continuation into the posttransfer year would require, on the face of it, the further improbable assumption that such manifestations appeared less serious when viewed within the framework of the receiving-school -- where teachers report a lesser occurrence of these behaviors in the native population -- than in the de facto segregated school where no such contrast existed. One might account for the initial posttransfer ratings as indicating teachers' reluctance to make early judgments about serious behavior problems in children new to the school. The repetition of the lower means in the spring measure, however, shows that to be an insufficient explanation.

In the K-1 subgroups, transfer pupils uniformly have the highest posttransfer means, but none differ significantly from the nontransfer and receiving-school means. At other grade levels, no consistent trends are apparent in the subgroups, and only one significant difference is found: among Negro girls in grades 2-3, the transfer mean is significantly lower than means for the other two groups, the receiving-school mean being the highest.

The general finding for race holds consistently for girls. Some exceptions are found among boys, primarily in the receiving-school subgroups, showing higher posttransfer ratings for the white pupils. Exceptions to the general finding for sex occur only among Negro pupils, also primarily in the receiving-school subgroups, showing somewhat higher ratings for girls than for boys.

Table 10-14. QUAY FACTOR 2 (Organic-Psychotic Manifestations):
POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	1.4	2.6	5	1.6	2.0	19	1.0	0.0	1	1.4	2.0	20	1.5	2.0	45
NT	0.7	1.4	37	1.5	2.1	19	0.3	0.8	32	0.9	1.5	29	0.8	1.4	117
R	0.8	1.3	289	0.5	0.7	10	0.3	0.8	275	0.6	1.1	8	0.6	1.1	582
		F= 0.659			F= 1.251			F= 0.033			F= 0.815			F=11.614**	
2-3: T	0.3	0.6	3	1.3	1.5	17	0.0	0.0	1	0.2	0.5	23	0.6	1.1	44
NT	1.2	1.9	28	0.7	0.9	21	0.4	0.7	33	0.7	1.6	35	0.7	1.4	117
R	0.7	1.3	290	0.6	0.8	7	0.3	0.9	278	1.7	2.5	7	0.5	1.1	582
		F= 2.041			F= 1.703			F= 0.793			F= 3.266*			F= 2.322	
4-5: T	1.0	1.4	5	0.5	0.9	16	0.3	0.6	3	0.3	0.7	10	0.5	0.9	34
NT	0.4	1.1	35	0.6	1.1	28	0.1	0.4	34	1.0	2.2	24	0.5	1.3	121
R	0.6	1.1	217	0.0	0.0	3	0.3	1.0	239	0.3	0.5	6	0.4	1.1	465
		F= 0.753			F= 0.482			F= 0.812			F= 0.703			F= 0.098	

(table continued below)

Table 10-14 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
	Posttransfer 2 (Spring)														
K-1: T	2.0	2.8	4	1.5	1.6	15	0.5	0.7	2	1.4	1.9	19	1.4	1.8	40
NT	0.9	1.6	35	1.3	2.0	19	0.2	0.7	34	0.7	1.3	27	0.7	1.4	115
R	0.8	1.4	278	0.8	1.3	12	0.3	0.9	268	0.4	0.7	8	0.6	1.2	566
	F= 1.246			F= 0.479			F= 0.163			F= 1.531			F= 8.020**		
2-3: T	0.0	0.0	3	1.0	1.2	14	0.0	0.0	2	0.3	0.7	22	0.5	0.9	41
NT	0.6	1.5	28	1.0	1.6	20	0.2	0.6	35	0.6	1.4	32	0.5	1.3	115
R	0.8	1.4	286	1.0	1.3	8	0.2	0.7	273	0.5	1.0	10	0.5	1.2	577
	F= 0.608			F= 0.006			F= 0.088			F= 0.393			F= 0.038		
4-5: T	0.6	0.9	5	0.6	1.5	16	0.3	0.6	3	0.8	1.5	10	0.6	1.3	34
NT	0.5	1.1	34	0.7	1.2	25	0.2	0.5	30	0.7	1.4	23	0.5	1.1	112
R	0.7	1.3	218	0.0	0.0	5	0.3	1.0	234	1.0	1.2	7	0.5	1.1	464
	F= 0.348			F= 0.628			F= 0.258			F= 0.094			F= 0.253		

The analysis of fall-to-spring changes in Factor 2 ratings reflects the sameness of the population means for those two periods, and the data are included here (Table 10-15) largely for purposes of comparison. There is little evidence of differential change in the three populations, and significant changes are limited to two of the nontransfer subgroups.

Quay Factor 3 (Neurotic Behavior)

Pretransfer data for Factor 3 are presented in Table 10-16. The general pattern of population means (T>NT>R) is seen here except for a reversal of the nontransfer and receiving-school means at grades K-1. Differences are significant at all grade levels.

The same general pattern is reflected in most of the subgroups, and in all, the greatest incidence of symptomatic behavior is seen in the transfer group. Significant differences are found among white girls and Negro girls at grades 2-3, and among white girls and white boys at grades 4-5. In the first of these subgroups, the nontransfer mean is considerably below the mean for the other two groups; in the others, the order parallels that of the total populations.

In contrast to the general findings for race and sex, differences between white and Negro pupils on this factor show no consistent direction, and only among white pupils are the means for boys generally higher than those for girls.

Posttransfer data for Quay Factor 3, appearing in Table 10-17, show the same overall pattern as the pretransfer data. The order of nontransfer and receiving-school means undergoes another reversal between fall and spring, but the two means do not differ appreciably in either set of data. As with the pretransfer ratings, significant population differences are seen in the fall data at all grade levels. In the final posttransfer measure, however, the populations differ significantly only at grades 4-5.

The fall posttransfer means for all three populations show a downward trend from the pretransfer values, indicative of less maladaptive behavior, except for a negligible increase in the receiving-school mean at grades 4-5. Substantial decreases are seen in the transfer group at grades

Table 10-15. CHANGE IN QUAY FACTOR 2 (Organic-Psychotic Manifestations): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+ 0.2	0.5	4	0.0	1.0	14	0.0	0.0	1	- 0.1	1.2	19
NT	+ 0.1	1.1	29	0.0	1.7	18	- 0.1	0.6	29	- 0.1	0.9	26
R	0.0	1.4	134	0.0	0.0	3	0.0	0.8	93	0.0	0.0	1
2-3: T	- 0.3	0.6	3	- 0.1	1.5	14	0.0	0.0	1	+ 0.2	0.6	22
NT	- 0.8*	1.6	25	+ 0.4	1.3	18	- 0.2	0.8	30	- 0.1	1.5	28
R	+ 0.2	1.1	99	+ 1.0	1.4	2	0.0	0.6	118	--	--	0
4-5: T	- 0.4	0.9	5	+ 0.1	1.7	16	0.0	0.0	2	+ 0.5	1.2	10
NT	+ 0.1	1.2	30	0.0	1.3	24	+ 0.1*	0.4	29	- 0.3	1.0	21
R	+ 0.1	0.8	68	--	--	0	+ 0.1	0.5	68	--	--	0

Table 10-16. QUAY FACTOR 3 (Neurotic Behavior): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	3.8	4.4	6	4.1	4.6	26	5.3	4.6	3	4.6	4.5	26	4.3	4.4	61
NT	2.4	3.1	40	1.9	2.0	27	2.1	2.8	37	2.8	3.3	39	2.4	2.9	143
R	3.0	3.3	248	1.7	2.9	3	2.3	3.2	189	0.0	0.0	1	2.7	3.3	441
	F= 0.665			F= 2.809			F= 1.427			F= 3.296			F= 8.062**		
2-3: T	3.5	5.2	4	5.8	3.1	21	6.8	6.3	4	4.6	3.9	25	5.1	3.9	54
NT	2.5	3.1	31	4.4	2.8	28	1.4	2.0	34	2.9	2.9	39	2.8	2.9	132
R	2.5	3.1	186	4.7	4.1	9	2.4	2.9	189	0.0	0.0	3	2.5	3.1	387
	F= 0.180			F= 1.124			F= 6.365**			F= 3.612*			F=17.012**		
4-5: T	5.8	5.0	6	4.3	4.9	18	3.8	5.7	4	5.6	6.2	12	5.2	5.3	40
NT	3.8	3.8	34	3.5	3.4	34	2.5	3.2	34	3.8	3.4	28	3.4	3.5	130
R	1.6	2.7	104	--	--	0	1.2	2.1	121	--	--	0	1.4	2.4	225
	F= 9.840**			F= 0.478			F= 5.529**			F= 3.539			F=32.808**		

K-1 and 2-3 (the latter a dramatic one), and in the receiving-school group at those same grade levels. The spring means are somewhat higher than the fall means, in all but the nontransfer group at grades 2-3 and the K-1 transfer group. In those two groups, the downward trend continued over the year; in the K-1 transfer group, the spring mean is considerably lower than the fall mean.

No significant differences are found within the subgroups in either posttransfer measure, and the subgroup means show no consistent order: the highest means occur with about equal frequency in the transfer, nontransfer, and receiving-school groups. A tendency is apparent for Negro boys in both the transfer and nontransfer groups to be rated somewhat higher in "neurotic behavior" than Negro receiving-school boys; the one exception occurs in the final posttransfer measure for grades 4-5. No other trends are evident.

The general finding for race begins to be evident in the fall posttransfer data and is clearly evident in the spring data. An exception is noted among receiving-school boys, where in most cases the means for Negroes are lower than those for white pupils. The general finding for sex likewise appears as a trend in the posttransfer data for Factor 3; it is most consistently evident among the white pupils, however.

The analysis of changes in Factor 3 ratings, reported in Table 10-18, bears out the general increase in population means from fall to spring. Changes are generally small, and most are positive except in the two population segments whose means decreased over that period -- transfer pupils in grades K-1 (where Negro girls showed a significant decrement), and nontransfer pupils in grades 2-3. Other significant changes, all in the direction of increased maladaptive behavior, are seen in one of the transfer subgroups (Negro boys in grades 2-3) and in three receiving-school subgroups: white girls and white boys in grades K-1, white boys in grades 2-3.

Quay Factor 4 (Immaturity)

Pretransfer data for Factor 4 are presented in Table 10-19. The highest means are consistently found in the transfer group, as with most Quay factors, but the order of the nontransfer and receiving-school means conforms to the general finding only at grades 4-5. At the earlier

Table 10-17. QUAY FACTOR 3 (Neurotic Behavior): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	2.2	3.3	5	3.6	3.8	19	6.0	0.0	1	3.7	4.5	20	3.6	4.0	45
NT	1.9	3.2	37	3.4	3.4	19	1.5	1.9	32	2.0	2.2	29	2.1	2.7	117
R	2.1	3.0	289	0.8	1.3	10	1.7	2.7	275	3.5	4.0	8	1.9	2.9	582
	F= 0.090			F= 2.734			F= 0.127			F= 1.741			F= 6.507**		
2-3: T	1.0	1.0	3	3.1	5.0	17	3.0	0.0	1	2.3	2.9	23	2.5	3.8	44
NT	2.6	3.7	28	3.9	3.9	21	1.8	2.7	33	2.4	3.3	35	2.5	3.4	117
R	2.1	2.8	290	1.4	1.4	7	1.4	2.6	278	5.0	5.2	7	1.8	2.8	582
	F= 0.629			F= 0.919			F= 0.833			F= 1.874			F= 4.304*		
4-5: T	2.0	3.4	5	3.4	3.9	16	0.0	0.0	3	3.6	3.3	10	2.9	3.5	34
NT	2.5	4.2	35	3.8	3.7	28	0.9	1.5	34	2.7	3.3	24	2.4	3.4	121
R	1.7	3.3	217	0.3	0.6	3	1.5	2.5	239	0.2	0.4	6	1.6	2.9	465
	F= 0.657			F= 1.200			F= 1.329			F= 2.429			F= 5.897**		

(table continued below)

Table 10-17 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	2.0	3.4	4	3.1	3.7	15	1.0	1.4	2	2.8	4.2	19	2.8	3.7	40
NT	2.5	2.9	35	3.6	3.5	19	1.5	2.1	34	1.9	2.8	27	2.2	2.8	115
R	2.5	3.4	278	2.4	2.5	12	2.0	2.9	268	2.4	3.2	8	2.3	3.1	566
		F= 0.057			F= 0.452			F= 0.583			F= 0.478			F= 0.476	
2-3: T	1.0	1.7	3	4.0	2.8	14	1.5	2.1	2	2.5	3.0	22	2.9	2.9	41
NT	1.9	3.4	28	3.4	3.5	20	1.3	2.0	35	2.3	2.9	32	2.1	3.0	115
R	2.1	2.9	286	1.9	1.8	8	1.6	2.4	273	3.5	3.1	10	1.9	2.7	577
		F= 0.286			F= 1.277			F= 0.245			F= 0.616			F= 2.496	
4-5: T	2.8	3.0	5	4.1	5.5	16	1.7	0.6	3	3.2	4.7	10	3.4	4.6	34
NT	2.9	4.3	34	4.4	4.6	25	0.8	2.0	30	3.2	3.7	23	2.7	3.9	112
R	2.2	3.5	218	4.6	4.7	5	1.6	2.7	234	4.0	3.9	7	2.0	3.2	464
		F= 0.670			F= 0.029			F= 1.451			F= 0.114			F= 4.600*	

Table 10-18. CHANGE IN QUAY FACTOR 3 (Neurotic Behavior): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	- 0.5	0.6	4	- 0.1	3.0	14	- 4.0	0.0	1	- 0.9*	1.4	19
NT	+ 0.7	2.0	29	+ 0.2	2.3	18	+ 0.1	1.6	29	- 0.1	2.5	26
R	+ 0.5*	2.5	134	+ 1.7	2.1	3	+ 0.5*	2.2	93	- 2.0	0.0	1
2-3: T	0.0	2.1	3	+ 1.8*	2.9	14	0.0	0.0	1	+ 0.4	1.5	22
NT	- 0.5	2.7	25	- 0.6	4.9	18	- 0.6	2.0	30	+ 0.2	3.2	28
R	+ 0.5*	2.5	99	+ 2.0	2.8	2	+ 0.3	1.9	118	--	--	0
4-5: T	+ 0.8	3.3	5	+ 0.7	4.0	16	+ 1.5	0.7	2	- 0.4	3.6	10
NT	+ 0.4	3.3	30	+ 0.2	4.9	24	- 0.2	1.4	29	+ 0.8	3.1	21
R	+ 0.4	1.9	68	--	--	0	+ 0.6	2.3	68	--	--	0

Table 10-19. QUAY FACTOR 4 (Immaturity): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	0.5	0.8	6	1.4	1.4	26	1.7	2.1	3	1.4	1.4	26	1.3	1.4	61
NT	0.3	0.9	40	0.7	0.9	27	0.4	0.6	37	0.4	0.9	39	0.4	0.8	143
R	0.8	1.2	248	0.0	0.0	3	0.5	1.2	189	0.0	0.0	1	0.7	1.2	441
	F= 3.483*			F= 3.801*			F= 2.017			F=11.689**			F=14.110**		
2-3: T	0.5	1.0	4	1.1	1.1	21	2.8	2.2	4	1.3	1.6	25	1.3	1.5	54
NT	0.3	0.8	31	0.8	1.0	28	0.3	0.6	34	0.5	0.9	39	0.4	0.8	132
R	0.4	0.8	186	1.6	2.2	9	0.5	0.9	189	0.0	0.0	3	0.5	0.9	387
	F= 0.448			F= 1.543			F=12.908**			F= 4.125*			F=17.253**		
4-5: T	1.0	1.1	6	0.4	1.0	18	0.8	1.0	4	1.3	1.4	12	0.8	1.2	40
NT	0.8	1.2	34	0.7	1.2	34	0.5	1.0	34	0.6	1.0	28	0.7	1.1	130
R	0.3	0.9	104	--	--	0	0.3	0.7	121	--	--	0	0.3	0.8	225
	F= 3.718*			F= 0.579			F= 1.201			F= 3.100			F= 7.561**		

grade levels, the nontransfer means are slightly below the receiving-school means. Significant differences are found at all grade levels.

Within the subgroups, means are generally highest for the transfer pupils. A notable exception shows white receiving-school boys in grades K-1 to be rated significantly more immature than their transfer and nontransfer counterparts. All other significant differences occur in subgroups conforming to the general order of population means (T>NT>R): both Negro subgroups in grades K-1, white and Negro girls in grades 2-3, and white boys in grades 4-5.

The general findings for race and sex do not apply to Factor 4 ratings. A slight tendency is seen for white girls to be rated more immature than Negro girls, within grades and populations, while differences between white and Negro boys favor the two groups about equally. Sex differences show no consistent direction on this scale.

Posttransfer data for Quay Factor 4, shown in Table 10-20, reflect the general finding for population means, but the range of means across populations is considerably smaller at each grade level than in the pretransfer year. In the first posttransfer ratings, population differences continue to be significant at grades K-1 and 2-3, but not at grades 4-5. In the subsequent spring ratings, the populations do not differ significantly at any grade level.

Fall means for the transfer and receiving-school groups are generally slightly lower than the corresponding pretransfer means, and substantially lower for the transfer group at grades 2-3. Fourth- and fifth-grade nontransfer pupils likewise show a small decrement, while the younger nontransfer groups show slightly increased means in the fall. Little difference is seen between the fall and spring data except in the K-1 transfer group, where the spring mean is considerably lower.

The order of posttransfer means within the subgroups is not consistent, although some general tendencies are evident. Among white boys and Negro girls, the highest means generally occur in the transfer group, and the means for Negro transfer boys are consistently higher than those of their Negro receiving-school classmates. No significant differences are found within subgroups, however, for either the fall or spring ratings.

Some evidence of the general trend for race is found in the posttransfer ratings, especially among girls. Whereas in the pretransfer ratings a slight tendency was observed for white girls to have higher means than Negro girls, the higher posttransfer means more often occur among Negro girls. As in the pretransfer data, sex differences do not favor either boys or girls consistently.

Fall-to-spring changes in Factor 4 ratings are shown in Table 10-21. As was suggested by the similarity in fall and spring population means, rated immaturity showed little change over the year except in the K-1 transfer group. There, small decrements are seen in all subgroups, and a significant one for Negro girls. The only other significant change, also in the direction of decreased immaturity, occurs in K-1 white receiving-school girls. With that exception, little or no change is seen in any of the receiving-school subgroups.

Quay Factor 5 (Distractibility)

Pretransfer data for Factor 5 are shown in Table 10-22. As with the previous scale, the population means conform to the general finding for the Quay factors (T>NT>R) except for reversals of the nontransfer and receiving-school means at grades K-1 and 2-3. Differences are significant at all grade levels.

When race and sex are taken into account, the transfer pupils continue to have the highest means, as a rule. Significant differences are seen for white and Negro boys in grades K-1, and for white girls and Negro boys in grades 2-3. In the latter subgroup, the means for transfer and receiving-school pupils are similar, and well above the nontransfer mean; in the others, the highest means occur in the transfer group.

The general findings for race and sex hold for this factor, on the whole. A few exceptions to the typical racial pattern are seen among receiving-school pupils -- all, however, in subgroups with very few Negro pupils.

Posttransfer data for Quay Factor 5 appear in Table 10-23. Means for the fall ratings conform to the general finding for population means; the spring means deviate at grades 2-3, where the nontransfer mean is slightly lower than the receiving-school mean. Significant differences are found at all grade levels, for both sets of posttransfer ratings.

Table 10-20. QUAY FACTOR 4 (Immaturity): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	1.0	1.0	5	1.2	1.3	19	2.0	0.0	1	1.2	1.1	20	1.2	1.2	45
NT	0.5	1.1	37	1.4	1.5	19	0.2	0.6	32	0.6	0.8	29	0.6	1.1	117
R	0.4	0.8	289	0.6	1.3	10	0.5	1.0	275	1.0	1.1	8	0.5	0.9	582
	F= 1.173			F= 1.136			F= 1.874			F= 2.091			F=11.293**		
2-3: T	1.0	1.0	3	0.7	0.9	17	0.0	0.0	1	0.9	1.4	23	0.8	1.2	44
NT	0.7	1.3	28	0.9	0.8	21	0.6	1.4	33	0.7	0.9	35	0.7	1.1	117
R	0.4	0.9	290	0.6	0.8	7	0.4	0.9	278	0.9	0.9	7	0.4	0.9	582
	F= 1.441			F= 0.349			F= 1.770			F= 0.403			F= 7.135**		
4-5: T	0.6	0.9	5	0.6	0.8	16	0.0	0.0	3	0.7	1.1	10	0.6	0.9	34
NT	0.5	1.1	35	0.7	1.1	28	0.2	0.6	34	0.7	1.2	24	0.5	1.0	121
R	0.3	0.8	217	0.0	0.0	3	0.3	0.9	239	0.3	0.5	6	0.3	0.8	465
	F= 0.647			F= 0.702			F= 0.452			F= 0.241			F= 2.754		

(table continued below)

Table 10-20 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	0.8	1.0	4	0.8	0.9	15	0.5	0.7	2	0.7	1.3	19	0.8	1.1	40
NT	0.6	1.2	35	1.1	1.1	19	0.2	0.5	34	0.4	0.6	27	0.5	0.9	115
R	0.5	0.9	278	0.6	1.2	12	0.5	0.9	268	0.8	1.2	8	0.5	0.9	566
	F= 0.197			F= 0.744			F= 1.190			F= 0.607			F= 1.501		
2-3: T	0.0	0.0	3	0.9	0.9	14	0.0	0.0	2	0.8	1.0	22	0.7	0.9	41
NT	0.5	0.8	28	0.8	1.4	20	0.2	0.6	35	0.8	0.9	32	0.5	0.9	115
R	0.4	1.1	286	0.5	0.8	8	0.3	0.7	273	1.0	1.4	10	0.4	0.9	577
	F= 0.317			F= 0.260			F= 0.886			F= 0.168			F= 2.946		
4-5: T	0.6	0.9	5	0.8	0.8	16	0.3	0.6	3	0.7	0.9	10	0.7	0.8	34
NT	0.6	0.9	34	0.6	0.6	25	0.2	0.5	30	0.5	0.7	23	0.5	0.7	112
R	0.5	1.0	218	0.4	0.9	5	0.4	0.9	234	0.3	0.5	7	0.4	0.9	464
	F= 0.247			F= 0.725			F= 0.684			F= 0.703			F= 1.673		

Table 10-21. CHANGE IN QUAY FACTOR 4 (Immaturity): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group		White boys			Negro boys			White girls			Negro girls		
		Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1:	T	- 0.2	1.3	4	- 0.4	0.8	14	- 1.0	0.0	1	- 0.4*	0.7	19
	NT	+ 0.2	0.6	29	- 0.2	1.5	18	- 0.0	0.8	29	- 0.1	0.8	26
	R	+ 0.1	1.0	134	0.0	0.0	3	- 0.2*	0.9	93	0.0	0.0	1
2-3:	T	- 1.0	1.0	3	+ 0.4	0.9	14	0.0	0.0	1	0.0	1.4	22
	NT	- 0.1	1.0	25	- 0.1	1.1	18	- 0.3	1.3	30	+ 0.2	1.1	28
	R	0.0	0.9	99	0.0	1.0	2	0.0	0.8	118	--	--	0
4-5:	T	0.0	0.0	5	+ 0.2	1.0	16	0.0	0.0	2	0.0	0.8	10
	NT	0.0	1.1	30	- 0.2	1.3	24	0.0	0.3	29	- 0.1	1.2	21
	R	0.0	0.6	68	--	--	0	0.0	0.6	68	--	--	0

Table 10-22. QUAY FACTOR 5 (Distractibility): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	5.2	5.8	6	8.6	5.9	26	2.3	2.5	3	4.7	4.9	26	6.3	5.6	61
NT	1.4	2.7	40	3.9	4.0	27	0.5	1.4	37	2.9	3.5	39	2.0	3.2	143
R	3.7	4.2	248	2.3	0.6	3	1.6	2.7	189	0.0	0.0	1	2.8	3.8	441
	F= 6.185**			F= 6.757**			F= 3.019			F= 2.905			F=26.745**		
2-3: T	3.8	4.8	4	8.0	5.0	21	6.2	7.1	4	4.4	4.3	25	5.9	5.0	54
NT	3.8	4.5	31	4.0	4.2	28	1.1	2.2	34	2.8	3.6	39	2.8	3.8	132
R	3.8	4.6	186	8.3	6.8	9	2.2	3.7	189	0.3	0.6	3	3.1	4.4	387
	F= 0.001			F= 5.047**			F= 4.194*			F= 2.346			F=11.155**		
4-5: T	1.7	4.1	6	5.8	6.3	18	2.0	2.8	4	3.9	3.5	12	4.2	5.1	40
NT	3.1	3.4	34	4.6	4.9	34	1.1	2.0	34	2.7	3.0	28	2.9	3.7	130
R	2.6	3.1	104	--	--	0	1.1	2.1	121	--	--	0	1.8	2.7	225
	F= 0.567			F= 0.650			F= 0.367			F= 1.232			F=10.834**		

Table 10-23. QUAY FACTOR 5 (Distractibility): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	7.6	6.0	5	6.9	4.2	19	14.0	0.0	1	4.2	5.1	20	6.0	5.0	45
NT	2.8	4.8	37	7.8	5.5	19	0.9	2.0	32	4.3	4.7	29	3.5	4.9	117
R	3.2	4.3	289	2.9	3.3	10	1.9	3.4	275	3.6	5.3	8	2.6	3.9	582
	F= 2.686			F= 3.785*			F= 2.918			F= 0.068			F=14.773**		
2-3: T	7.3	7.5	3	7.8	5.5	17	1.0	0.0	1	2.8	3.7	23	5.0	5.2	44
NT	4.1	5.3	28	3.3	4.0	21	1.0	2.4	33	3.0	3.5	35	2.8	4.0	117
R	3.5	4.7	290	5.6	4.2	7	1.1	2.7	279	5.7	4.2	7	2.4	4.0	583
	F= 1.172			F= 4.307*			F= 0.122			F= 1.789			F= 8.167**		
4-5: T	1.6	2.5	5	4.6	4.6	16	1.3	2.3	3	2.5	2.6	10	3.2	3.8	34
NT	2.8	3.8	35	3.5	4.6	28	0.7	2.2	34	2.3	2.8	24	2.3	3.5	121
R	2.7	3.6	217	1.3	1.2	3	1.2	2.6	239	0.5	0.8	6	1.9	3.2	465
	F= 0.242			F= 0.736			F= 0.416			F= 1.379			F= 3.202*		

(table continued below)

Table 10-23 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
Posttransfer 2 (Spring)															
K-1: T	7.8	2.2	4	6.9	5.7	15	1.5	2.1	2	4.2	5.5	19	5.4	5.4	40
NT	2.5	4.6	35	6.8	5.4	19	0.8	1.7	34	3.3	4.6	27	2.9	4.5	115
R	3.3	4.5	278	4.8	4.5	12	2.0	3.5	268	3.5	5.1	8	2.7	4.1	566
		F= 2.500			F= 0.663			F= 1.755			F= 0.189			F= 7.910**	
2-3: T	6.0	5.6	3	8.4	5.5	14	0.5	0.7	2	5.1	4.6	22	6.1	5.1	41
NT	2.5	3.7	28	4.5	5.4	20	0.4	1.2	35	2.8	3.3	32	2.3	3.7	115
R	3.4	4.3	286	5.9	6.6	8	1.3	2.7	273	4.2	5.2	10	2.5	3.9	577
		F= 1.127			F= 1.996			F= 1.879			F= 2.030			F=16.822**	
4-5: T	3.2	3.1	5	8.2	7.2	16	2.3	3.2	3	3.7	3.0	10	5.6	5.8	34
NT	3.1	4.3	34	2.9	3.5	25	0.6	1.5	30	2.8	3.3	23	2.3	3.5	112
R	3.2	4.4	218	4.6	5.7	5	1.3	2.7	234	3.6	3.6	7	2.3	3.8	464
		F= 0.023			F= 4.855*			F= 1.177			F= 0.338			F=12.110**	

Overall, the fall means tend to be somewhat below the pretransfer means, indicating a lesser degree of distractibility. This is consistently the case in the transfer group, where a small decrement is seen at grades K-1 and substantial ones at the higher grade levels. The only appreciable increase over the pretransfer level occurs in the K-1 nontransfer group. Differences between the fall and spring means show no consistent pattern. In the transfer group, a further decrement is seen at grades K-1, while marked increases are seen in the spring means for grades 2-3 and 4-5. In the nontransfer group, fall and spring means are identical for grades 4-5, while the means for younger pupils tend to be lower in the spring data. Receiving-school means tend to be slightly higher at the end of the year but do not differ appreciably from the pretransfer means.

Within the subgroups, the order of means is not consistent, although transfer pupils most often have the highest ratings, particularly in the spring data. Only three significant differences are found, all involving Negro boys. In two cases (grades 2-3 for the fall measure, grades 4-5 for the spring measure), the mean distractibility ratings for Negro transfer boys are somewhat higher than the counterpart receiving-school means, and substantially higher than the means for nontransfer Negro boys. The other significant difference shows Negro transfer and nontransfer boys in grades K-1 rated significantly more distractible in the fall data than Negro boys in the receiving-school group.

As in the pretransfer data, the general findings for race and sex apply here, with almost complete consistency in the spring data.

Fall-to-spring changes in Factor 5 ratings are shown in Table 10-24. On the whole, teachers rated the Negro transfer pupils slightly higher in distractibility at the end of the year, a tendency not generally evident in the ratings of Negro nontransfer and receiving-school pupils. The transfer gains are significant for Negro transfer girls in grades 2-3. The one exception to this general trend involves the Negro transfer girls in grades K-1, who showed a slight decrement over the year.

The only other consistent trend seen in the change data shows a slight increase in rated distractibility for fourth- and fifth-grade transfer and receiving-school pupils. Nontransfer pupils show no consistent pattern of change at any grade level; the one significant change in that group is a decrement among white boys in grades 2-3.

Table 10-24. CHANGE IN QUAY FACTOR 5 (Distractibility): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	- 1.5	3.9	4	+ 0.2	4.0	14	-11.0	0.0	1	- 0.3	2.5	19
NT	- 0.8	2.6	29	- 0.7	2.8	18	+ 0.2	2.1	29	- 0.9	3.1	26
R	- 0.0	3.8	134	- 0.7	1.2	3	- 0.5	2.7	93	0.0	0.0	1
2-3: T	- 1.3	6.1	3	+ 1.8	5.0	14	- 1.0	0.0	1	+ 2.7**	4.2	22
NT	- 2.1*	4.0	25	+ 1.1	5.0	18	- 0.6	2.7	30	0.0	2.6	28
R	+ 0.6	3.3	99	+ 0.5	7.8	2	+ 0.2	2.1	118	--	--	0
4-5: T	+ 1.6	2.3	5	+ 3.6*	5.2	16	+ 1.5	0.7	2	+ 1.2	2.9	10
NT	+ 0.5	2.8	30	- 0.2	4.4	24	0.0	1.7	29	+ 0.5	2.6	21
R	+ 0.5	2.6	68	--	--	0	+ 0.2	1.2	68	--	--	0

Quay Factor 6 (Aggression)

Pretransfer data for Factor 6, shown in Table 10-25, parallel the general finding for population means (T>NT>R) except at grades K-1, where the nontransfer mean is substantially lower than both the transfer and receiving-school means. Significant differences are seen at all grade levels.

When the populations are divided by race and sex, the transfer pupils continue to show the highest aggression ratings in nearly every case; the nontransfer and receiving-school means show no consistent order within the subgroups. Four significant differences are found, showing white transfer and receiving-school boys rated more aggressive than white nontransfer boys in grades K-1, and Negro transfer boys and girls in those grades, and white transfer girls in grades 2-3, more aggressive than their nontransfer and receiving-school counterparts.

The general findings for race and sex, predictably, hold for this factor.

Posttransfer data for Quay Factor 6 appear in Table 10-26. The typical order of means (T>NT>R) is reflected in both posttransfer measures except at grades 4-5, where the fall ratings show the nontransfer pupils to be rated well above both the transfer and receiving-school groups. The spring ratings for grades 4-5 revert to the general pattern. As in the pretransfer data, the differences here are significant at all grade levels.

The fall posttransfer means are in most cases somewhat lower than the pretransfer means, and dramatically so for the transfer group at grades 2-3 and 4-5, as well as the K-1 receiving-school group. A few small increases, including the transfer group at grades K-1, constitute the exceptions. From fall to spring, slight increases in the means are found in all but two cases. The fourth- and fifth-grade transfer group shows a marked increase, reflecting primarily the much higher spring ratings of Negro pupils, and especially Negro girls. The K-1 nontransfer mean shows essentially no change.

Within the subgroups, no significant differences are found and the order of means shows little consistency. In the two lower grade groups, the highest aggression ratings are most often seen in the transfer group.

Table 10-25. QUAY FACTOR 6 (Aggression): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	5.7	11.1	6	8.9	8.3	26	3.0	5.2	3	4.1	5.6	26	6.3	7.6	61
NT	1.5	3.1	40	3.7	6.2	27	1.1	3.2	37	1.6	2.8	39	1.8	3.9	143
R	4.6	6.0	248	1.0	1.7	3	1.2	3.0	189	0.0	0.0	1	3.1	5.2	441
	F= 5.164**			F= 4.245*			F= 0.556			F= 5.922*			F=15.382**		
2-3: T	6.2	12.5	4	10.2	8.7	21	5.2	10.5	4	6.1	8.2	25	7.6	8.9	54
NT	3.3	5.9	31	6.2	7.7	28	0.2	0.7	34	3.9	6.8	39	3.3	6.2	132
R	3.1	5.3	186	8.6	10.0	9	1.4	3.2	189	0.7	1.2	3	2.4	4.7	387
	F= 0.641			F= 1.357			F= 5.280**			F= 1.142			F=21.258**		
4-5: T	1.8	2.1	6	5.9	6.4	18	0.8	1.5	4	7.7	9.5	12	5.3	7.1	40
NT	1.7	3.5	34	6.1	6.8	34	0.4	1.1	34	3.1	5.5	28	2.8	5.1	130
R	1.4	2.6	104	--	--	0	0.6	1.8	121	--	--	0	0.9	2.2	225
	F= 0.211			F= 0.008			F= 0.105			F= 3.629			F=23.594**		

Table 10-26. QUAY FACTOR 6 (Aggression): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	3.0	4.2	5	10.0	10.6	19	16.0	0.0	1	4.4	5.9	20	6.8	8.6	45
NT	2.6	5.3	37	9.7	8.5	19	0.8	3.4	32	3.7	6.3	29	3.5	6.4	117
R	2.4	4.5	289	2.7	3.8	10	0.9	2.5	275	3.0	6.2	8	1.7	3.8	582
	F= 0.075			F= 2.644			F= 0.026			F= 0.152			F=29.771**		
2-3: T	2.7	4.6	3	8.1	8.0	17	0.0	0.0	1	3.6	5.7	23	5.2	6.8	44
NT	1.4	3.0	28	5.6	8.9	21	0.5	2.6	33	4.3	6.9	35	2.8	6.0	117
R	2.2	4.3	290	3.4	7.0	7	0.7	2.6	279	6.7	9.3	7	1.6	3.8	583
	F= 0.481			F= 0.897			F= 0.235			F= 0.578			F=15.637**		
4-5: T	0.0	0.0	5	3.2	6.5	16	0.0	0.0	3	1.5	1.4	10	1.9	4.6	34
NT	2.3	5.0	35	5.7	7.6	28	0.9	3.2	34	3.8	7.0	24	3.0	6.0	121
R	2.2	4.7	217	0.0	0.0	3	0.9	3.2	239	2.0	3.2	6	1.5	4.0	465
	F= 0.539			F= 1.276			F= 0.126			F= 0.703			F= 5.038**		

(table continued below)

Table 10-26 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	9.8	7.5	4	11.4	10.9	15	5.5	7.8	2	3.7	7.2	19	7.3	9.3	40
NT	3.3	6.2	35	8.9	7.2	19	1.0	2.7	34	2.4	4.8	27	3.4	5.8	115
R	3.2	5.8	278	6.1	7.9	12	1.0	2.9	268	3.0	6.2	8	2.2	4.8	566
	F= 2.483			F= 1.237			F= 2.365			F= 0.264			F=17.884**		
2-3: T	3.0	3.0	3	7.2	7.9	14	0.0	0.0	2	5.8	7.0	22	5.8	7.1	41
NT	2.1	5.4	28	7.2	8.6	20	0.2	0.5	35	5.8	8.5	32	3.4	6.9	115
R	2.8	4.8	286	6.8	6.1	8	1.1	2.8	273	3.3	5.9	10	2.1	4.1	577
	F= 0.332			F= 0.011			F= 1.810			F= 0.451			F=13.970**		
4-5: T	1.2	1.3	5	5.8	8.3	16	0.0	0.0	3	6.2	6.9	10	4.7	7.0	34
NT	3.6	6.9	34	5.7	7.9	25	0.7	1.6	30	4.0	6.0	23	3.4	6.2	112
R	2.6	4.7	218	6.2	7.3	5	1.1	3.0	234	9.1	11.7	7	2.0	4.3	464
	F= 0.803			F= 0.009			F= 0.502			F= 1.333			F= 7.733**		

In grades 4-5, the nontransfer means are generally highest; the only exceptions occur in the spring ratings, where means for the Negro receiving-school pupils are somewhat higher than those for their transfer and nontransfer counterparts. At all grade levels, the means for white girls tend to be very low, relative to the other subgroups.

Race and sex differences parallel those of the pretransfer data, and are substantial.

Fall-to-spring changes in Factor 6 ratings are shown in Table 10-27. Mean changes tend to be small, on the whole, but the largest generally occur in the transfer group. The bulk of the changes are in the direction of increased aggression, paralleling the small increases seen in the spring population means. Significant increments are seen among white receiving-school boys in grades K-1, Negro transfer girls in grades 2-3, and Negro transfer boys in grades 4-5. Negro transfer girls in grades 4-5 show the largest mean increment seen in any group of reasonable size, but given the substantial variability of that group, the increment is not significant.

It should be noted that the findings for the Quay aggression ratings are in general agreement with those for the composite McNeil rating discussed earlier in this chapter. The latter necessarily shows a more restricted range of values, but major findings for the two sets of ratings are in accord.

Quay Factor 7 (Passivity)

Pretransfer data for Factor 7 are presented in Table 10-28. The general finding for population means (T>NT>R) applies here except at grades K-1, where the nontransfer and receiving-school means are the same. Differences are significant at all grade levels.

Within the subgroups, means for the transfer pupils are generally higher than, or at least comparable to, the nontransfer and receiving-school means. Only one significant difference is found, however, that showing white transfer girls in grades 2-3 to be rated substantially more

Table 10-27. CHANGE IN QUAY FACTOR 6 (Aggression): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+ 6.0	7.6	4	+ 2.9	6.7	14	- 5.0	0.0	1	- 0.3	2.5	19
NT	+ 0.1	3.8	29	- 0.4	5.3	18	0.0	1.6	29	- 1.9	4.8	26
R	+ 1.1**	4.4	134	+ 1.0	1.7	3	+ 0.2	2.9	93	0.0	0.0	1
2-3: T	+ 0.3	5.5	3	- 0.2	6.7	14	0.0	0.0	1	+ 2.5*	5.3	22
NT	0.0	1.8	25	+ 1.1	4.6	18	- 0.4	2.8	30	+ 1.0	7.3	28
R	+ 0.4	4.1	99	+ 2.0	2.8	2	+ 0.1	1.9	118	--	--	0
4-5: T	+ 1.2	1.3	5	+ 2.6*	4.4	16	0.0	0.0	2	+ 4.7	6.5	10
NT	+ 1.3	4.1	30	+ 0.2	6.8	24	0.0	3.2	29	0.0	5.6	21
R	+ 0.2	2.5	68	--	--	0	+ 0.2	1.9	68	--	--	0

Table 10-28. QUAY FACTOR 7 (Passivity): PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	3.3	4.4	6	4.0	3.8	26	4.3	2.5	3	3.9	4.4	26	3.9	4.0	61
NT	1.6	2.1	40	1.5	2.5	27	1.5	1.9	37	2.3	3.4	39	1.7	2.6	143
R	1.8	2.5	248	1.0	1.7	3	1.7	2.2	189	2.0	0.0	1	1.7	2.4	441
	F= 1.320			F= 4.390*			F= 2.343			F= 2.810			F=19.128**		
2-3: T	2.2	2.1	4	2.8	2.4	21	4.2	6.0	4	2.4	2.5	25	2.7	2.7	54
NT	2.3	2.4	31	2.1	2.9	28	1.8	1.7	34	2.4	2.8	39	2.2	2.5	132
R	1.6	2.1	186	3.2	4.8	9	1.5	2.1	189	1.3	0.6	3	1.6	2.2	387
	F= 1.740			F= 0.533			F= 3.340*			F= 0.247			F= 7.421**		
4-5: T	2.3	3.3	6	2.3	2.8	18	0.8	1.0	4	2.9	3.8	12	2.3	3.1	40
NT	1.7	2.7	34	1.1	1.6	34	1.1	1.6	34	1.5	2.4	28	1.3	2.1	130
R	1.2	1.9	104	--	--	0	0.8	1.4	121	--	--	0	1.0	1.7	225
	F= 1.286			F= 3.885			F= 0.985			F= 2.002			F= 8.374**		

"passive"[1] than their counterparts in the nontransfer and receiving-school groups.

Neither race nor sex differences show a consistent pattern on this measure. A tendency is seen for white boys to be rated slightly more passive than white girls, and for Negro boys to be rated slightly less passive than Negro girls, but the differences are generally small.

Posttransfer data for Quay Factor 7, appearing in Table 10-29, show the same general pattern as the pretransfer data except at grades K-1. There, the transfer and nontransfer means are comparable, and only slightly higher than the receiving-school mean. Differences between means are generally smaller than in the pretransfer data; the only significant difference occurs at grades 4-5, in the first posttransfer measure.

The fall means for the transfer group are consistently lower than the pretransfer means, and substantially so at grades K-1 and 2-3. Means for the other two groups are not appreciably different in the fall, except in the nontransfer group at grades 2-3, where the fall mean is somewhat lower. The fall and spring means do not differ appreciably for any group.

Within the subgroups, no consistent pattern of differences is evident, although the highest means most often occur in the transfer group. The only significant difference involves the fall posttransfer ratings for white boys in grades 4-5. There, the nontransfer mean is somewhat higher than the transfer mean, and well above the mean for receiving-school pupils.

The general finding for race is evident among girls here, but not with any consistency among boys. White boys continue to be rated slightly higher than white girls, on the whole, while the reverse tendency is again apparent among Negro pupils.

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[1] It should be noted here that while a majority of the Factor 7 items reflect "passivity" in the conventional sense, the scale includes some items with a primary focus on inattentiveness (e.g., daydreaming, preoccupation). This should be kept in mind in any interpretation of the findings; the two do not always go together.

Table 10-29. QUAY FACTOR 7 (Passivity): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	2.6	3.1	5	1.5	2.4	19	0.0	0.0	1	2.2	3.5	20	1.9	2.9	45
NT	1.6	2.3	37	2.2	3.2	19	1.4	1.6	32	2.8	2.4	29	2.0	2.4	117
R	1.4	2.3	289	0.4	1.0	10	1.6	2.4	275	2.6	3.0	8	1.5	2.3	582
	F= 0.813			F= 1.623			F= 0.071			F= 0.251			F= 2.553		
2-3: T	2.3	2.5	3	2.4	2.5	17	2.0	0.0	1	1.2	2.1	23	1.8	2.2	44
NT	2.3	3.4	28	1.6	2.7	21	1.2	1.7	33	1.5	2.6	35	1.6	2.6	117
R	1.7	2.7	290	1.0	1.4	7	1.1	2.2	278	3.7	3.6	7	1.4	2.5	582
	F= 0.754			F= 0.955			F= 0.023			F= 2.703			F= 0.647		
4-5: T	1.4	3.1	5	1.8	2.1	16	0.3	0.6	3	2.5	2.7	10	1.8	2.4	34
NT	2.0	2.5	35	1.6	2.8	28	0.8	0.9	34	1.8	2.2	24	1.5	2.2	121
R	0.9	1.7	217	0.7	1.2	3	1.2	2.0	239	1.7	3.2	6	1.1	1.9	465
	F= 5.066**			F= 0.232			F= 0.938			F= 0.316			F= 4.212*		

(table continued below)

Table 10-29 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	1.2	1.0	4	2.1	2.8	15	1.0	1.4	2	2.3	3.2	19	2.0	2.8	40
NT	1.9	2.7	35	1.8	3.0	19	1.0	1.7	34	2.3	2.4	27	1.7	2.4	115
R	1.4	2.1	278	1.9	2.9	12	1.6	2.4	268	2.0	2.8	8	1.5	2.3	566
	F= 1.023			F= 0.025			F= 0.893			F= 0.044			F= 1.371		
2-3: T	1.7	2.9	3	1.9	2.4	14	3.0	0.0	2	1.5	2.0	22	1.7	2.1	41
NT	1.5	2.3	28	1.8	2.7	20	0.9	1.5	35	1.4	1.5	32	1.3	2.0	115
R	1.4	2.1	286	1.9	2.8	8	1.0	1.7	273	3.0	2.5	10	1.2	2.0	577
	F= 0.045			F= 0.000			F= 1.495			F= 3.007			F= 1.290		
4-5: T	1.6	2.1	5	2.4	3.1	16	0.3	0.6	3	1.4	1.6	10	1.8	2.4	34
NT	2.0	3.0	34	1.6	2.7	25	0.7	1.4	30	2.0	3.1	23	1.6	2.6	112
R	1.3	2.4	218	1.0	1.2	5	1.1	1.9	234	0.7	1.0	7	1.2	2.1	464
	F= 1.172			F= 0.650			F= 0.817			F= 0.786			F= 2.117		

Fall-to-spring changes in Factor 7 ratings, shown in Table 10-30, bear out the similarity of the fall and spring population means. An overall tendency toward slight positive change is seen in all three populations at grades 4-5, and in the receiving-school population at grades 2-3. Elsewhere, no consistent pattern is evident. Mean changes are generally negligible, and none are statistically significant.

Quay Factor 8 (Values)

Pretransfer data for Factor 8 are shown in Table 10-31. The general finding for population means applies here, and significant differences are found at all grade levels.

When race and sex are taken into account, no consistent order of means is evident, although among Negro pupils the highest means -- indicating low superego influence on behavior -- generally occur in the transfer group. Significant differences are found in only two subgroups: among white boys in grades 4-5, nontransfer pupils were rated significantly higher than transfer and receiving-school pupils; among Negro boys at that grade level, transfer pupils were rated significantly higher than nontransfer pupils.

The general findings for race and sex apply here, on the whole, although among Negro pupils, differences between boys and girls do not favor either group consistently.

Posttransfer data for Quay Factor 8, appearing in Table 10-32, reflect the same general pattern as the pretransfer data. The range of means tends to be smaller at each grade level, particularly at grades 4-5, where the three populations do not differ significantly in the fall ratings. In all other cases, however, significant differences are found.

Fall means tend to be slightly below the pretransfer means, generally speaking, but the only dramatic difference is the drop occurring in the fourth- and fifth-grade transfer pupils. From fall to spring, the means for all groups tend to increase slightly, with appreciable increments seen in the transfer group at grades 2-3 and 4-5.

Within subgroups, no significant differences are found and no consistent pattern is evident. As with the pretransfer data, the highest means occur most often in the transfer group. In most subgroups, the transfer pupils tend to show higher ratings than their receiving-school classmates.

Table 10-30. CHANGE IN QUAY FACTOR 7 (Passivity): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	- 2.0	2.8	4	+ 0.8	2.8	14	0.0	0.0	1	- 0.1	1.4	19
NT	+ 0.1	1.6	29	- 0.3	1.7	18	- 0.1	1.8	29	- 0.3	1.6	26
R	0.0	2.2	134	0.0	0.0	3	- 0.2	1.8	93	- 3.0	0.0	1
2-3: T	- 0.7	1.2	3	- 0.1	3.1	14	+ 1.0	0.0	1	+ 0.5	1.2	22
NT	- 0.6	1.8	25	+ 0.3	3.1	18	- 0.4	1.6	30	0.0	1.6	28
R	+ 0.4	2.5	99	+ 2.5	3.5	2	+ 0.1	1.3	118	--	--	0
4-5: T	+ 0.2	1.5	5	+ 0.6	2.7	16	0.0	0.0	2	- 1.1	2.5	10
NT	+ 0.3	2.1	30	+ 0.3	2.9	24	0.0	1.3	29	+ 0.3	3.1	21
R	+ 0.3	1.3	68	--	--	0	+ 0.2	1.1	68	--	--	0

Table 10-31. QUAY FACTOR 8 (Values):[a] PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	1.2	2.0	6	3.2	3.7	26	0.3	0.6	3	1.6	1.9	26	2.2	2.9	61
NT	0.7	2.1	40	1.7	3.3	27	0.6	2.3	37	1.0	1.6	39	1.0	2.3	143
R	1.4	2.7	248	0.0	0.0	3	0.6	1.5	189	0.0	0.0	1	1.0	2.3	441
	F= 1.246			F= 2.039			F= 0.062			F= 1.529			F= 6.827**		
2-3: T	1.5	1.9	4	2.2	2.6	21	1.5	1.9	4	1.6	2.0	25	1.8	2.2	54
NT	1.2	1.8	31	1.6	2.8	28	0.3	0.9	34	2.0	3.5	39	1.3	2.6	132
R	1.0	2.4	186	3.9	6.2	9	0.6	1.6	189	1.0	1.7	3	0.9	2.3	387
	F= 0.198			F= 1.514			F= 1.239			F= 0.251			F= 4.509*		
4-5: T	0.3	0.8	6	2.9	3.3	18	0.2	0.5	4	2.6	3.3	12	2.2	3.0	40
NT	0.9	1.8	34	1.3	1.9	34	0.1	0.7	34	1.3	2.1	28	0.9	1.7	130
R	0.3	0.6	104	--	--	0	0.2	0.9	121	--	--	0	0.2	0.8	225
	F= 4.922**			F= 4.969*			F= 0.112			F= 2.291			F=30.087**		

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[a] A high score indicates low superego influence on overt behavior.

Posttransfer race and sex differences parallel those found in the pretransfer data: Negro pupils are generally rated higher than white pupils of the same sex, and white boys higher than white girls; the differences between Negro boys and girls show no consistent direction.

Fall-to-spring changes in Factor 8 ratings are reported in Table 10-33. Mean changes are generally small, and most are positive, with perhaps one exception worth noting. Negro transfer girls in grades K-1 showed a small decrement, suggesting a tendency toward increased superego influence on behavior in that group. The decrement is not significant, but it is the largest to occur in any subgroup of reasonable size; it is also the only decrement found among Negro transfer pupils. Significant increments, suggestive of reduced superego influence, are seen in three Negro transfer subgroups (boys in grades K-1, girls in grades 2-3 and 4-5) and in three white receiving-school subgroups (boys and girls in grades K-1, girls in grades 4-5).

4. Social Stimulus Characteristics

"Social stimulus" characteristics were assessed via a brief rating scale devised for the present study. Pupils in all grades were rated on four such characteristics: cleanliness and grooming, physical attractiveness, likeability (the personality counterpart to physical attractiveness), and leadership (influence). Each characteristic was rated on a 5-point scale, with "5" the optimal rating. Scale points were defined in terms of the attributes which the rating was to take into account. For example, on the cleanliness and grooming scale, a rating of 5 was defined as "unusually clean, neat, well-groomed in comparison with most pupils his age"; a rating of "1" was defined as "untidy, poorly groomed, poor personal hygiene in comparison with most pupils his age."

A fifth characteristic -- skin color -- was examined for Negro pupils. Teachers rated skin color on the following 3-point scale: "very dark," "neither very dark nor very light," "very light." Examination of the data for Negro transfer pupils showed an astonishing lack of consistency in judgments of skin color over the three assessment periods. Fall posttransfer ratings for 41 percent of these children differed from their pretransfer ratings -- seemingly a large

Table 10-32. QUAY FACTOR 8 (Values): POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	1.2	1.6	5	2.9	5.4	19	6.0	0.0	1	2.0	3.3	20	2.4	4.2	45
NT	0.5	1.0	37	3.0	4.2	19	0.1	0.3	32	1.2	2.6	29	1.0	2.4	117
R	0.6	2.1	289	0.3	0.5	10	0.2	0.8	275	1.6	3.2	8	0.4	1.6	582
	F= 0.295			F= 1.483			F= 0.630			F= 0.349			F=22.387**		
2-3: T	1.7	2.9	3	2.6	3.7	17	0.0	0.0	1	0.7	1.5	23	1.5	2.7	44
NT	0.6	1.0	28	1.4	3.1	21	0.0	0.0	33	1.4	2.5	35	0.8	2.0	117
R	0.5	1.4	290	0.7	1.1	7	0.2	0.7	279	1.4	2.5	7	0.4	1.2	583
	F= 0.976			F= 1.219			F= 1.408			F= 0.806			F=15.093**		
4-5: T	0.0	0.0	5	1.3	2.4	16	1.0	1.7	3	0.7	1.3	10	0.9	1.9	34
NT	0.3	0.6	35	0.5	1.3	28	0.1	0.5	34	1.0	2.0	24	0.4	1.2	121
R	0.5	1.4	217	0.0	0.0	3	0.3	1.2	239	0.5	1.2	6	0.4	1.3	465
	F= 0.852			F= 1.333			F= 0.851			F= 0.190			F= 2.396		

(table continued below)

Table 10-32 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	3.2	2.4	4	3.5	5.2	15	0.5	0.7	2	1.6	3.2	19	2.4	4.0	40
NT	1.1	2.7	35	2.5	2.9	19	0.2	0.9	34	1.7	3.4	27	1.2	2.6	115
R	1.2	3.0	278	0.8	2.0	12	0.6	2.0	268	1.8	2.7	8	0.9	2.5	566
	F= 1.011			F= 1.735			F= 0.496			F= 0.016			F= 6.443**		
2-3: T	1.7	1.5	3	3.6	4.3	14	0.0	0.0	2	1.7	2.0	22	2.2	3.1	41
NT	0.4	1.0	28	1.8	3.4	20	0.1	0.4	35	1.8	3.5	32	0.9	2.5	115
R	0.8	2.0	286	2.6	4.0	8	0.3	1.1	273	0.9	1.4	10	0.6	1.7	577
	F= 1.130			F= 0.827			F= 0.689			F= 0.367			F=13.999**		
4-5: T	0.0	0.0	5	1.7	2.6	16	1.3	2.3	3	2.3	3.1	10	1.6	2.5	34
NT	1.1	3.0	34	0.7	1.9	25	0.1	0.5	30	0.9	1.8	23	0.7	2.1	112
R	0.6	1.6	218	1.6	3.6	5	0.5	1.4	234	1.9	2.6	7	0.6	1.5	464
	F= 1.303			F= 0.998			F= 1.593			F= 1.409			F= 5.548**		

Table 10-33. CHANGE IN QUAY FACTOR 8 (Values): POSTTRANSFER 1 (Fall) TO POSTTRANSFER 2 (Spring)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
K-1: T	+ 1.8	2.2	4	+ 1.9*	2.3	14	- 5.0	0.0	1	- 0.5	2.1	19
NT	+ 0.1	1.0	29	- 0.4	3.8	18	+ 0.1	0.8	29	+ 0.1	2.0	26
R	+ 0.7**	2.5	134	0.0	0.0	3	+ 0.5*	2.2	93	0.0	0.0	1
2-3: T	0.0	2.4	3	+ 1.2	2.5	14	0.0	0.0	1	+ 1.0*	2.3	22
NT	- 0.2	0.9	25	+ 0.8	3.6	18	+ 0.1	0.4	30	+ 0.6	2.6	28
R	0.0	1.2	99	+ 4.0	5.7	2	+ 0.1	1.0	118	0.0	0.0	0
4-5: T	0.0	0.0	5	+ 0.4	1.1	16	+ 0.5	0.7	2	+ 1.6*	2.1	10
NT	+ 0.9	2.8	30	+ 0.1	1.9	24	0.0	0.7	29	- 0.1	1.8	21
R	+ 0.1	0.8	68	0.0	0.0	0	+ 0.3*	1.0	68	0.0	0.0	0

percentage even when one considers that the two sets of ratings were products of different teachers and very different racial settings. From fall to spring of the posttransfer year, 23 percent of the skin color ratings changed -- these ratings the product of the same teachers and the same setting, in most cases! With an overall figure of 61 percent of the Negro transfer pupils rated differently on skin color at least once in the three sets of data, the measure was not investigated further.[1]

The sum of the ratings on the first four characteristics listed was examined as a potential measure of overall "impact." Correlations between the impact score and the component characteristics were high enough (in the .70's) to suggest that such treatment was warranted. Only the impact measure (maximum score 20) is reported here.

Pretransfer data for Social Stimulus "impact" are shown in Table 10-34. Significant differences are found among the three populations at grades K-1 and 2-3, where mean impact scores are highest in the receiving-school population, followed in order by the nontransfer and transfer populations. At grades 4-5, the impact measure does not significantly differentiate the three populations. The transfer mean is highest, though close to the receiving-school mean; both are somewhat above the nontransfer mean.

When the populations are divided by race and sex, significant differences are found only among white girls in grades K-1 and 2-3. In both cases, the mean impact scores of transfer pupils are well below those of the

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[1] While the skin color ratings proved too unreliable for the intended purpose here, the unreliability itself is of interest. Somewhat more than half (60%) of the pre- to posttransfer changes showed children rated as darker in skin color by their receiving-school teachers -- a contrast phenomenon, perhaps. Changes over the posttransfer year were about evenly divided between "darker" and "lighter" ratings. Time did not permit further exploration of these data, but they do raise some intriguing questions -- for example, were children whose skin color was perceived differently at the beginning and end of the posttransfer year also perceived differently in other ways by their receiving-school teachers?

Table 10-34. SOCIAL STIMULUS "IMPACT": PRETRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
K-1: T	13.7	3.8	6	12.6	3.6	25	11.0	3.2	4	12.2	4.0	26	12.4	3.7	61
NT	14.3	2.9	40	13.3	2.6	27	14.2	3.2	37	11.7	3.3	38	13.4	3.2	142
R	14.0	2.9	253	13.9	3.3	8	14.7	3.0	226	12.5	3.1	10	14.3	3.0	497
	F= 0.263			F= 0.634			F= 3.221*			F= 0.295			F=12.552**		
2-3: T	14.8	2.5	4	11.9	2.3	21	10.2	4.3	4	13.4	2.8	25	12.7	2.9	54
NT	13.3	3.3	31	12.6	2.7	28	14.2	2.3	34	12.3	3.2	39	13.1	3.0	132
R	14.0	2.8	167	--	--	0	13.8	3.0	151	--	--	0	13.9	2.9	318
	F= 0.929			F= 0.811			F= 3.247*			F= 2.146			F= 6.273**		
4-5: T	14.5	2.2	6	13.6	2.8	17	14.2	2.1	4	13.2	3.3	12	13.7	2.8	39
NT	13.1	2.7	34	12.9	2.5	34	13.3	3.1	34	11.3	3.3	27	12.7	3.0	129
R	13.0	3.2	155	13.4	1.5	5	13.7	3.0	145	12.7	3.4	9	13.3	3.1	314
	F= 0.660			F= 0.396			F= 0.318			F= 1.518			F= 2.407		

other two groups. Generally speaking, however, the lowest subgroup means appear more often in the nontransfer group than in either the transfer or receiving-school groups. At grades 4-5, the highest means are consistently found in the transfer group; at the other grade levels, no consistent pattern is seen.

Within grades and populations, racial differences in the impact score are slight, as a rule. The direction of the differences, however, favors the white pupil in all but two instances: Negro transfer girls in grades K-1 and 2-3 are rated slightly higher in impact than white transfer girls in those grades. Sex differences are similarly small, and among white pupils show no consistent direction. Among Negro pupils, boys tend to be rated slightly higher than girls.

Posttransfer data for the impact measure are presented in Table 10-35. Consistently here, the means are lowest in the transfer population and highest in the receiving-school population. Differences are significant at all grade levels, for both posttransfer measures.

The fall means do not differ appreciably from the pretransfer means, in most cases, nor in a consistent direction. K-1 transfer pupils were rated slightly higher by their receiving-school teachers than by their former teachers in the *de facto* segregated school. The reverse is true for transfer pupils at the other grade levels, however, and at grades 4-5 the difference is considerable. These decrements are reflected in the transfer subgroup means, and are seen to be somewhat larger for Negro girls than for Negro boys. The nontransfer and receiving-school groups differ little on the two sets of ratings.

Fall and spring means do not differ appreciably. The transfer population is seen to hold its own, however, relative to the other two groups.

Within the subgroups, only two significant differences appear: on the fall posttransfer measure, Negro nontransfer boys in grades K-1 show somewhat lower impact scores than Negro transfer and receiving-school boys; on the spring posttransfer measure, white receiving-school boys at grades 4-5 show higher scores than their transfer and nontransfer counterparts. In the white subgroups, transfer pupils generally have the lowest means. In the Negro subgroups, nontransfer pupils most often have the lowest means; in most cases,

Table 10-35. SOCIAL STIMULUS "IMPACT": POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 1 (Fall)								
K-1: T	11.6	2.5	5	13.7	3.4	19	12.0	0.0	1	12.4	3.5	20	12.9	3.3	45
NT	14.1	2.7	37	11.9	2.2	19	13.9	2.3	32	11.4	2.4	29	13.0	2.7	117
R	13.8	2.7	287	14.4	2.2	10	14.1	3.0	275	12.8	3.3	8	13.9	2.8	580
	F= 1.901			F= 3.490*			F= 0.130			F= 1.057			F= 7.171**		
2-3: T	12.0	1.7	3	11.2	3.1	17	11.0	0.0	1	12.5	3.0	23	12.0	3.0	44
NT	13.8	2.8	28	13.0	2.3	21	14.2	2.5	33	12.5	2.4	35	13.4	2.6	117
R	13.3	2.8	290	12.2	3.1	6	13.7	2.8	278	10.7	1.7	7	13.5	2.8	581
	F= 0.636			F= 1.815			F= 1.102			F= 1.550			F= 6.001**		
4-5: T	12.2	4.3	5	13.1	2.0	16	11.7	1.5	3	11.5	3.5	10	12.4	2.8	34
NT	12.4	3.2	35	13.6	2.9	28	13.1	3.0	34	10.5	3.2	24	12.5	3.2	121
R	13.3	2.7	216	12.3	0.6	3	13.5	2.9	239	12.0	1.3	6	13.4	2.8	464
	F= 2.094			F= 0.503			F= 0.836			F= 0.723			F= 5.905**		

(table continued below)

Table 10-35 (continued)

Group	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
							Posttransfer 2 (Spring)								
K-1: T	12.0	2.4	4	13.8	2.6	15	9.5	3.5	2	13.1	3.5	19	13.1	3.1	40
NT	14.0	2.5	35	12.3	2.3	19	14.1	2.4	34	11.8	2.6	27	13.3	2.6	115
R	13.8	2.9	278	14.3	3.0	12	14.1	3.3	268	13.2	3.0	8	13.9	3.1	566
	F= 0.875			F= 2.579			F= 2.037			F= 1.339			F= 3.657*		
2-3: T	12.3	3.1	3	11.4	3.3	14	9.0	2.8	2	12.6	3.4	22	12.0	3.3	41
NT	13.4	2.2	28	13.2	2.6	20	13.9	2.5	35	12.2	2.3	32	13.2	2.4	115
R	13.1	2.8	286	12.4	4.7	8	13.6	3.0	273	11.9	3.1	10	13.3	2.9	577
	F= 0.303			F= 1.162			F= 2.632			F= 0.296			F= 3.699*		
4-5: T	12.8	2.5	5	13.1	3.0	16	11.0	1.0	3	11.0	3.1	10	12.3	2.9	34
NT	12.1	3.4	34	14.0	2.5	25	13.4	2.6	30	10.0	2.6	23	12.4	3.2	112
R	13.6	2.9	218	12.4	1.1	5	13.7	3.0	234	12.4	2.8	7	13.6	2.9	464
	F= 4.215*			F= 0.994			F= 1.277			F= 2.106			F= 9.476**		

however, the Negro transfer pupils have slightly lower scores than their Negro classmates in the receiving schools.

Race and sex differences continue to be small. White girls maintain a slight edge over Negro girls, with the exceptions noted previously. Posttransfer differences among boys, however, favor whites and Negroes about equally. Comparisons of the means for white boys and girls show the latter to have slightly higher scores except in the transfer group, where an opposite tendency is seen. Among Negro pupils, boys continue to have slightly higher ratings, on the whole.

As noted at the beginning of this chapter, change in the impact measure was analyzed from the pretransfer year to fall of the posttransfer year, as well as from fall to spring of the posttransfer year. That analysis is reported in Table 10-36.

Changes from the pretransfer to the fall posttransfer measure reflect the differences noted in the population means for those two periods. Slight increments are seen in all the K-1 transfer subgroups except white boys ($\underline{n} = 4$), while in the corresponding nontransfer subgroups, Negro pupils of both sexes show a decrement, the boys a significant one. At the higher grade levels, small mean decrements are seen in all the transfer subgroups. These decrements are smallest among Negro boys, larger among Negro girls; at grades 4-5, the decrement for girls is significant. Changes in the nontransfer subgroups at the higher grade levels are small but positive in most cases; a significant gain is seen for nontransfer white boys in grades 2-3. No significant changes are seen in the receiving-school subgroups, and no consistent pattern is evident there.

Fall-to-spring changes are negligible, and none are statistically significant. In most subgroups, however, changes in the ratings of transfer pupils tend to be more positive, overall, than changes in the ratings of nontransfer and receiving-school pupils. That is, when there are gains, they are generally largest in the transfer group; when there are decrements, they are generally smallest in the transfer group. Only among Negro transfer boys is this not the case. As noted in connection with the spring population means, the transfer pupils appear to have held their own, over the year, in terms of the impact ratings of their receiving-school teachers.

5. Summary

On the whole, teachers' ratings of pupil behavior in school indicated the highest incidence of problem behavior in the transfer population, and the lowest incidence among receiving-school pupils, both before and after the transfer. Related findings for a majority of the ratings showed problem behavior to be somewhat more prominent in boys than in girls, and in Negro pupils compared with white pupils. The latter result suggests that the differential findings for the three populations may be partially a function of their differing racial compositions.

There are inherent difficulties in the interpretation of subjective ratings as descriptive of actual behavior. However, the general findings here have some objective support in the extension of supportive school services to the transfer population -- and to boys and to Negro pupils generally -- with disproportionately high frequency, as reported in an earlier chapter. Within the framework of the general findings stated above, the data provided by teachers' ratings of pupil behavior can be summarized as follows.

General classroom adjustment was consistently described as poorer in the transfer population, in both the pre- and posttransfer years, than in the nontransfer and receiving-school populations. Contributing to the adjustment rating were teacher judgments of adaptability, self-assurance, acceptance by classmates, anxiety, attitude toward accomplishment, and reactions to failure and to criticism.

Prior to the transfer, the younger transfer pupils (grades K-3) were seen as less frequently satisfied with themselves than their counterparts in the other populations, while at grades 4-5, initial ratings on this characteristic were comparable in the transfer and receiving-school groups and higher than the ratings for nontransfer pupils. In the fall of the posttransfer year, the older transfer pupils showed a decline in rated self-satisfaction which was maintained over the year. A similar early decline in the K-1 transfer group was subsequently compensated by a significant fall-to-spring gain. For the posttransfer year as a whole, transfer pupils at all grade levels were rated somewhat lower in self-satisfaction than pupils in the other two groups.

Table 10-36. CHANGE IN SOCIAL STIMULUS "IMPACT": PRE- TO POSTTRANSFER YEAR

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
				Pretransfer to Posttransfer 1 (Fall)								
K-1: T	- 1.2	3.2	4	+ 2.0	4.0	14	+ 2.0	0.0	1	+ 0.1	3.5	19
NT	+ 0.1	3.1	29	- 1.6*	2.5	18	+ 0.4	3.1	29	- 0.5	2.5	26
R	+ 0.4	3.1	98	0.0	1.1	6	- 0.3	3.0	85	+ 3.0	1.0	3
2-3: T	- 2.3	1.2	3	- 0.1	3.3	14	- 3.0	0.0	1	- 0.8	2.5	22
NT	+ 1.4*	2.6	25	+ 0.9	2.8	18	- 0.1	3.2	30	+ 0.4	3.0	28
R	- 0.1	3.1	111	--	--	0	+ 0.6	2.8	97	--	--	0
4-5: T	- 2.0	3.5	5	- 0.2	2.3	15	- 2.5	2.1	2	- 1.7*	2.1	10
NT	- 0.3	2.6	30	+ 0.8	2.3	24	+ 0.2	2.5	29	+ 0.4	2.8	20
R	+ 0.3	2.7	92	+ 0.5	0.7	2	- 0.2	2.5	95	+ 1.5	1.7	4

(table continued below)

Table 10-36 (continued)

Group	White boys			Negro boys			White girls			Negro girls		
	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n	Mean diff	σ diff	n
						Posttransfer 1 to Posttransfer 2 (Spring)						
K-1: T	+ 1.5	2.1	4	- 0.5	2.3	14	0.0	0.0	1	+ 0.6	2.2	19
NT	- 0.2	2.4	29	+ 0.3	1.6	18	- 0.2	1.3	29	+ 0.3	1.4	26
R	+ 0.1	2.3	98	- 0.2	1.9	6	+ 0.3	2.1	85	- 1.7	0.6	3
2-3: T	+ 0.3	1.5	3	- 0.1	2.1	14	0.0	0.0	1	0.0	1.9	22
NT	- 0.4	1.9	25	+ 0.2	1.4	18	- 0.2	1.4	30	- 0.6	2.1	28
R	- 0.1	2.2	111	--	--	0	- 0.1	2.1	97	--	--	0
4-5: T	+ 0.6	1.9	5	- 0.3	1.9	15	0.0	1.0	2	- 0.5	0.8	10
NT	- 0.5	1.7	30	- 0.2	2.2	24	- 0.1	1.8	29	- 0.5	2.1	20
R	+ 0.3	1.8	92	- 1.0	1.4	2	+ 0.1	1.9	95	- 1.2	2.5	4

Pretransfer ratings of aggression were highest for the transfer group except at grades K-1, where the three populations did not differ significantly. In the posttransfer year, aggression was rated consistently higher in the transfer group, at all grade levels, and a significant increase in aggression was reported for fourth- and fifth-grade Negro transfer boys from fall to spring.

On a series of eight rating scales reflecting maladaptive behavior, some departures were noted from the general findings stated at the outset. Before the transfer, deceitful behavior (lying, cheating, etc.) was seen as more prominent among transfer pupils in grades 2-5, but present to about the same degree in K-1 pupils from all populations. Following the transfer, population differences found initially at grades 2-5 appeared at all grade levels, reflecting in part a significant fall-to-spring increase in the ratings for K-1 Negro transfer boys.

On another of the scales, symptoms of serious behavior disorders (poor coordination, peculiar ideas, destructiveness, etc.) were reported as initially more prominent in the transfer group, at all grade levels. Following the transfer, mean ratings for the transfer group declined markedly, and differed significantly from the ratings for the other two populations only at grades K-1.

On a third scale, reflecting "neurotic" behavior (feelings of inferiority, emotional instability, etc.), initially higher ratings for the transfer group diminished over the posttransfer year, although a significant fall-to-spring increase was seen in the ratings for one subgroup (Negro boys in grades 2-3). At the end of the posttransfer year, the three populations did not differ significantly on this measure.

Similarly, pretransfer differences in rated immaturity, indicating the transfer group to be least mature, vanished over the course of the posttransfer year. Negro transfer girls in grades K-1 showed a significant decrement in immaturity over this period, seen also in their white receiving-school classmates but not in the nontransfer group.

Ratings on another of these scales indicated that distractability was relatively unaffected by the transfer, though it tended to decline slightly in all populations in the posttransfer year. Both before and after the transfer, mean distractibility ratings were highest for the transfer group; ratings for Negro transfer girls in grades 2-3 showed a significant increase from fall to spring.

Findings for aggression in this set of scales closely paralleled those for the global rating of aggression discussed earlier. The transfer pupils were consistently rated more aggressive than pupils in the nontransfer and receiving-school groups, both before and after the transfer. Two of the transfer subgroups (Negro girls in grades 2-3, Negro boys in grades 4-5) showed significant fall-to-spring increases in rated aggression.

Ratings of "passivity" (unwillingness to compete, shyness, excessive daydreaming, etc.) showed initial differences among the three populations, with the transfer group rated highest on these characteristics. Initial differences diminished over the posttransfer year and were not significant at the end of the year.

The last of these eight scales, dealing with the low superego influence on behavior (unfairness, dishonesty, insincerity, etc.), showed the highest ratings in the transfer group both before and after the transfer. Significant fall-to-spring changes, in the direction of diminished superego influence, were seen at grades K-1 in Negro transfer boys and their white boy classmates in the receiving-schools, at grades 2-3 in Negro transfer girls, and at grades 4-5 in Negro transfer girls and white receiving-school girls.

Pretransfer ratings on four "social stimulus" characteristics (cleanliness and grooming, physical attractiveness, likeability, leadership), combined in an overall "impact" score, generated lower means in the transfer group than in the nontransfer and receiving-school groups. At grades 4-5, however, differences among the three populations were not significant. In the posttransfer year, "impact" scores were significantly lower for transfer pupils at all grade levels, with Negro transfer girls in grades 4-5 showing a significant decrease from the pretransfer ratings. A similar decrease among K-1 nontransfer Negro boys was not paralleled in the transfer group.

Chapter 11

CONCOMITANTS OF CHANGE

As a preliminary step in the analysis of change, the transfer pupils were classified in three groups on the basis of posttransfer gains in reading achievement: those demonstrating "normal" or greater gains, those showing some gain but less than a normal year's progress in terms of the test norms, and those showing no gain or a drop in reading age over the posttransfer year. Other pupil data were then tallied accordingly, in an effort to identify variables predictive of academic success. On inspection, no systematic relationships were evident between gains in reading and the other variables examined.

A second, similar effort was undertaken with the transfer pupils grouped on the basis of changes in IQ (gain, no change, or loss), with similar results.[1] It appeared, moreover, that there was little relationship between changes in reading achievement and changes in IQ -- a finding confirmed in the more formal analysis described below.

1. Correlates of Change Scores

Correlations were computed between pre- to posttransfer change scores on key behavioral variables and a host of other measures, including baseline (pretransfer) data, a few relevant measures from the posttransfer year (expressed attitude toward the transfer, absence rate, number of physical and/or behavioral problems recorded by teachers), selected demographic variables, and information obtained from pre- and posttransfer interviews with parents. As noted in an earlier chapter, this analysis utilized data for the Negro transfer pupils only. The strong evidence of racial differences in a majority of the measures argued against a meaningful interpretation of correlations based on a racially mixed group, and there were too few white transfer pupils to warrant a separate analysis. A similar concern about sex differences led to consideration of separate analyses for Negro transfer boys and girls. However, change scores for the variables which had been examined at that point did not suggest any systematic relationship between sex and pre- to posttransfer change, and the idea of separate analyses was abandoned in favor of preserving the larger sample size.

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[1] Distributions of changes in reading age and IQ for the transfer population, by race, sex, and grade, are reported in Appendix E.

The key variables examined for correlates of change include selected measures of scholastic aptitude and achievement, all questionnaire measures discussed in the previous chapters, the most salient sociometric measure (acceptance by peers), and autonomous achievement motivation.

Changes in several other variables were examined in relation to those above, but were not pursued as such, for one reason or another: arithmetic achievement, because the timing of the pre- and posttests ruled out a clear interpretation of change in relation to the transfer (see Chap. 6); expressed personal aspiration, because of its apparent unreliability (Chap. 7); teachers' ratings of pupil behavior, because of the inherent difficulties in interpreting pre- to posttransfer change in those ratings (Chap. 10). Only for the Coopersmith and Social Stimulus ratings were change-score correlations with the key variables computed; the limited range of possible scores on the McNeil ratings and the preponderance of zero scores on the Quay factors suggested that change scores on these ratings would contribute little in this kind of analysis.[1]

Correlates of change in the key variables, from the pretransfer year to the end of the posttransfer year, are discussed below, in the same order as the appearance of those variables in the preceding chapters. Only significant correlations ($\underline{p} \leq .05$) are reported.

Scholastic Aptitude and Achievement

Correlates of change in IQ are shown in Table 11-1. Here, the largest correlation is seen to be a moderate one with pretransfer IQ, and it is negative, indicating that the greater gains in IQ tended to occur among pupils with the lower pretransfer scores. A positive correlation of about the same magnitude suggests that changes in IQ and in California Arithmetic scores paralleled each other to a limited extent. It will be noted, however, that change in reading achievement did not correlate significantly with change in IQ.

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[1] Decisions concerning this analysis had to be made before most of the earlier analyses were completed. When the data presented in Chapter 10 became available, it appeared that both the McNeil and Quay ratings probably showed enough pre- to posttransfer variance to warrant investigation in this context. Further analysis is anticipated.

Other significant correlations suggest that the Negro transfer child showing a gain in IQ tends to be one who participates regularly in a variety of informal out-of-school activities (e.g., playing with friends, watching television, taking part in neighborhood sports activities) but is relatively inactive in church and community programs; one who demonstrates a reasonable degree of physical fitness; one who showed a decrease in school-related anxiety over the posttransfer year, who perceived his relationships with classmates and teacher in the _de facto_ segregated school as not entirely satisfying, who was rated by that teacher as somewhat aggressive, and who expressed a positive reaction

Table 11-1. CORRELATES OF CHANGE IN TOTAL IQ

Variable	_n_	_r_
Total IQ (pre)	95	-.40**
California Arithmetic Total (change, pre to post 2)	37	.38*
No. informal leisure-time activities (post)	71	.35**
No. organized nonschool activities (post)	82	-.32**
Physical fitness: sit-ups (pre)	66	.30*
SA: School Anxiety (change, pre to post 2)	61	-.30*
[a]SA: Interpersonal Relationships (pre)	72	-.27*
Quay F6: Aggression (pre)	95	.26*
Pupil attitude toward transfer (post 2)	72	.26*

Note.--Pre- and posttransfer measures are identified in this and subsequent tables as _pre_, _post 1_ (fall), and _post 2_ (spring).

[a] The word "negative" is omitted from the scale title here and in the tables which follow, so that the scale direction can be read properly in relation to the correlations. High scores on the scale indicate _positive_ interpersonal relationships.

to the transfer when interviewed at the end of the posttransfer year.

Correlates of change in reading age (Table 11-2) indicate little in the pretransfer data -- including pretransfer reading scores -- that might be predictive of posttransfer gains. Changes in the two Gates reading measures are of course substantially correlated, and vocabulary change parallels to some degree change in self-esteem. However, pretransfer levels of self-esteem showed no systematic relationship to posttransfer reading change. The only pretransfer measure showing such a relationship, and it is a small one, is the teacher's rating of "likeability," which correlated positively with change in vocabulary scores. A similarly small correlation indicates that gains in vocabulary scores tended to occur more commonly among Negro transfer pupils for whom parents had relatively high educational expectations. Gains in average reading performance show some degree of correspondence with higher posttransfer "impact" ratings, but no other significant correlations.

Table 11-2. CORRELATES OF CHANGE IN GATES READING SCORES

Variable	n	r
VOCABULARY:		
Gates average reading performance (change, pre to post 2)	78	.68**
Coopersmith: Self-Esteem (change, pre to post 2)	60	.32**
Parent expectations for child's education	67	.29*
Soc. Stim: Likeability (pre)	95	.23*
AVERAGE READING PERFORMANCE:		
Soc. Stim: "Impact" (change, pre to post 2)	78	.24*

Self-Esteem

Correlates of change in Coopersmith Self-Esteem scores are shown in Table 11-3. The two largest correlations indicate that gains in self-esteem tended to be additive over the posttransfer year: pupils showing the greatest gains at

Table 11-3. CORRELATES OF CHANGE IN SELF-ESTEEM (Coopersmith)

Variable	n	r
Coopersmith: Self-Esteem (change, post 1 to post 2)	60	.62**
Coopersmith: Self-Esteem (change, pre to post 1)	60	.53**
Coopersmith: Self-Esteem (pre)	60	-.46**
SA: Self-Perceived Behavior (change, pre to post 2)	60	.33*
Gates Vocabulary (change, pre to post 2)	60	.32*
Parent expectations for child's education	50	.29*
Personal aspiration (change, pre to post 2)	60	.27*

the end of the year tended to be those who demonstrated initial gains in the fall and further gains between fall and spring. A moderate negative correlation with pretransfer self-esteem scores indicates that the pupils showing such gains were more often pupils with relatively low self-esteem scores in the pretransfer year. Other significant correlations suggest that the child gaining in self-esteem also tended to view his classroom behavior as more acceptable, to perform better on the Gates Vocabulary test, and to express aspirations toward a higher-status adult occupation at the end of the posttransfer year. He is also somewhat more likely to have parents with high expectations as to the number of years of schooling he will complete.

Motivation

Correlates of change on the self-report motivational scale from the School Attitudes card sort appear in Table 11-4. It will be recalled that this scale, Academic Success and Morale, reflects both interest in school and the child's perceptions of his own academic performance. Here, as was found for self-esteem, pupils showing the greatest overall gains at the end of the year tended to show cumulative gains over that year, and to have relatively low pretransfer scores. Parents of these children tended to express relatively positive attitudes toward school during the posttransfer year (but not necessarily during the pretransfer year). The children themselves tended to view their classroom behavior as increasingly more acceptable over this period, and to express a more positive attitude toward teachers and peers.

Table 11-4. CORRELATES OF CHANGE IN ACADEMIC SUCCESS AND MORALE (SA)

Variable	n	r
SA: Academic Success and Morale (pre to post 1)	61	.59**
SA: Academic Success and Morale (post 1 to post 2)	61	.47**
SA: Academic Success and Morale (pre)	61	-.41**
Parent attitude toward school (post)	53	.30*
SA: Self-Perceived Behavior (change, pre to post 1)	61	.29*
SA: Self-Perceived Behavior (change, pre to post 2)	61	.29*
SA: Peer Relationships (change, post 1 to post 2)	61	.29*
SA: Interpersonal Relationships (change, pre to post 2)	61	.27*
Soc. Dist: Acceptance of Peers (pre)	61	.26*

They also tended to express relatively positive feelings the previous year toward their classmates in the de facto segregated school.

Change on the above measure did not correlate significantly with change on the Classroom Questionnaire Motivation scale (Table 11-5), which focuses on interest and attentiveness in school. Overall gains on the latter measure are substantially correlated with early posttransfer gains (but not with subsequent gains), and to some extent with relatively low pretransfer scores. Children making the greatest gains on the Motivation scale tended to perceive their receiving-school teachers, and the receiving-school milieu generally, as providing greater support than the de facto segregated school; they also tended to show a reduction in general anxiety between fall and spring of the posttransfer year. Parents tended to express high occupational aspirations for these children, and to be relatively stable residents of the community and the ghetto area. One further significant correlation suggests that the greatest gains on the Motivation scale tended to occur among children who, during the pretransfer year, were relatively uninvolved in leisure-time activities at home and in the neighborhood.

Table 11-5. CORRELATES OF CHANGE IN MOTIVATION (CQ)

Variable	n	r
CQ: Motivation (change, pre to post 1)	60	.66**
CQ: Perception of Teacher (change, pre to post 2)	60	.44**
CQ: Supportive Classroom Milieu (change, pre to post 2)	60	.37**
GASC: General Anxiety (change, post 1 to post 2)	59	-.32*
Parent aspirations for child's adult career	44	.30*
CQ: Motivation (pre)	60	-.30*
CQ: Perception of Teacher (change, post 1 to post 2)	60	.29*
Years of residence at present address	51	.29*
No. informal leisure-time activities (pre)	60	-.29*
Years of residence in Ann Arbor	59	.26*

Correlates of change in autonomous achievement motivation -- risk-taking preferences based on the child's expectations concerning his own performance -- are shown in Table 11-6. As with most of the other measures discussed here, pupils making the greatest gains tend to be those with relatively low pretransfer scores -- and, interestingly, those relatively low in pretransfer reading achievement as well. Gains tended to occur among children who viewed positively their relationships with peers and teachers in the de facto segregated school, and whose perceptions in that regard showed no systematic change over the posttransfer year; children who tended to view their own classroom behavior as relatively acceptable during the pretransfer year, but less so early in the posttransfer year; children who at that time showed a decrease in school-related anxiety, yet found the receiving-school classroom climate less supportive then than at the end of the posttransfer year. Children making the greatest gains tend to be those whose classroom adjustment was rated more favorably at the end of the posttransfer year than at the beginning, but who in both years were described by their teachers as exhibiting somewhat more physical and/or behavioral problems than other Negro transfer pupils.

Two curious findings deserve brief mention. One is the small positive correlation between gain in achievement motivation and years of residence in Ann Arbor -- a community that is strongly achievement-oriented! The other is a moderate correlation with one of the physical fitness measures -- the bent arm hang, which is the girls' equivalent of the pull-ups test for boys. The correlation here is negative, suggesting that gains in achievement motivation occur more frequently among girls demonstrating less physical skill. On the face of it, this finding would seem to be in conflict with the tentative hypothesis offered by Veroff & Peele (Appendix D), suggesting that Negro children may have somewhat greater physical capabilities than their white peers, that this characteristic generates different rewards for boys and for girls, and that these differential rewards may account in part for the differential gains in achievement motivation shown by Negro boys and girls in the transfer group. The evidence from one measure of physical fitness does not, of course, constitute a serious challenge to the hypothesis, and perhaps it is worth noting that the corresponding fitness measure for boys shows a positive, though nonsignificant, correlation with gain in achievement motivation.

Table 11-6. CORRELATES OF CHANGE IN AUTONOMOUS ACHIEVEMENT MOTIVATION

Variable	n	r
Autonomous achievement motivation (pre)	92	-.61**
Physical fitness: bent arm hang, girls (pre)	25	-.46*
SA: Interpersonal Relationships (pre)	59	.36**
SA: Self-Perceived Behavior (pre)	59	.31*
SA: Self-Perceived Behavior (change, pre to post 1)	59	-.29*
CQ: Supportive Classroom Milieu (change, post 1 to post 2)	59	.27*
SA: School Anxiety (change, pre to post 1)	59	-.27*
Coopersmith: General Classroom Adjustment (change, post 1 to post 2)	92	.24*
Physical-behavioral problems (pre)	90	.24*
[a]Gates Vocabulary (pre)	76	-.24*
[a]Gates average reading performance (pre)	76	-.23*
Physical-behavioral problems (post)	90	.22*
Years of residence in Ann Arbor	91	.22*

[a]Corrected for age differences (reading age minus chronological age)

Interpersonal Relationships

Correlates of change in the sociometric measure Acceptance by Peers are presented in Table 11-7. Negro transfer pupils showing the greatest overall gains in peer acceptance tend to be those who were initially better liked by their receiving-school classmates -- and increasingly so over the year -- than by their peers of both sexes in the de facto segregated school. Correspondingly, their own perceptions of their general interpersonal relationships tended to be more positive in the receiving school and they tended to be perceived by teachers as having greater impact in their receiving-school classes. They tend to be children who reported increased positive feelings about school and their own performance early in the posttransfer year, and who expressed higher occupational aspirations at the end of that year. They are more often children rated in the pretransfer year as showing little superego control over

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Table 11-7. CORRELATES OF CHANGE IN ACCEPTANCE BY PEERS

Variable	n	r
Soc. Dist: Acceptance by Peers (change, pre to post 1)	96	.69**
Soc. Dist: Acceptance by Peers (pre)	96	-.55**
Soc. Dist: Acceptance by Opposite-Sex Peers (pre)	96	-.46**
Soc. Dist: Acceptance by Same-Sex Peers (pre)	96	-.42**
Soc. Dist: Acceptance by Peers (change, post 1 to post 2)	96	.38**
Quay F8: Low superego influence (pre)	96	.35**
Personal aspiration (change, pre to post 2)	91	.32**
SA: Academic Success and Morale (change, pre to post 1)	77	.29**
SA: Interpersonal Relationships (change, pre to post 2)	61	.29*
SA: Interpersonal Relationships (pre)	72	-.29*
SA: Interpersonal Relationships (change, pre to post 1)	62	.27*
Soc. Stim: "Impact" (change, pre to post 2)	94	.26*
McNeil: Self-Satisfaction (pre)	96	-.26*
Mother's education	94	.24*
Quay F7: Passivity (pre)	96	.24*
No. organized nonschool activities (post)	83	-.23*
Quay F6: Aggression (pre)	96	.21*

behavior, and less consistently as passive (inattentive?), aggressive, and demonstrating little self-satisfaction in their de facto segregated classes. They tend to have relatively well-educated mothers, and to have participated little in church and community programs during the posttransfer year.

Correlates of change in the child's perceptions of his peer relationships, as measured by one of the School Attitudes scales, appear in Table 11-8. As with the preceding measure, the more positive changes at the end of the posttransfer year are associated with increasingly positive perceptions over that year, and with lower pretransfer scores. Change in perceived peer relationships tends to be associated with change in general interpersonal relationships, as measured by another of the School Attitudes scales, although the degree of correspondence between the two measures is not great. Children showing more positive feelings about their peer relationships tended also to view their classroom behavior as increasingly more acceptable, and to report increased school-related anxiety over the posttransfer year. They tend to be children rated as physically attractive by their former teachers in the de facto segregated school.

Table 11-8. CORRELATES OF CHANGE IN PEER RELATIONSHIPS (SA)

Variable	n	r
SA: Peer Relationships (change, post 1 to post 2)	61	.59**
SA: Peer Relationships (pre)	61	-.59**
SA: Peer Relationships (change, pre to post 1)	61	.52**
SA: Self-Perceived Behavior (change, pre to post 2)	61	.36**
SA: School Anxiety (change, pre to post 2)	61	.35**
Soc. Stim: Physical Attractiveness (pre)	61	.33*
SA: Self-Perceived Behavior (change, pre to post 1)	61	.32*
SA: Interpersonal Relationships (change, pre to post 2)	61	.31*
SA: School Anxiety (change, pre to post 1)	61	.26*
SA: Interpersonal Relationships (change, pre to post 1)	61	.25*

6

Change in the School Attitudes measure of general interpersonal relationships (Table 11-9) shows a broader pattern of correlates than the peer relationship measure discussed above. Here, too, however, the more positive changes are seen to be cumulative over the posttransfer year, and they occur most commonly among pupils who viewed somewhat negatively their relationships with peers and teachers in the *de facto* segregated school. Children showing the most positive posttransfer changes in perception of their interpersonal relationships at school tend to be those who experienced the climate of the receiving school as increasingly more supportive than that of their previous school; those who gained in self-esteem from fall to spring of the posttransfer year; those who perceived their peer relationships as more positive and were, in fact, somewhat better accepted

Table 11-9. CORRELATES OF CHANGE IN (NEGATIVE)[a] INTERPERSONAL RELATIONSHIPS

Variable	n	r
SA: Interpersonal Relationships (change, pre to post 1)	61	.67**
SA: Interpersonal Relationships (pre)	61	-.50**
SA: Interpersonal Relationships (change, post 1 to post 2)	61	.46**
CQ: Supportive Classroom Milieu (change, pre to post 2)	60	.46**
Coopersmith: Self-Esteem (change, post 1 to post 2)	60	.42**
Parent perception of child's attitude toward transfer (post)	53	.35*
SA: Peer Relationships (change, pre to post 2)	61	.31*
CQ: Supportive Classroom Milieu (change, pre to post 1)	60	.30*
Soc. Dist: Acceptance by Peers (change, pre to post 2)	61	.29*
No. responsibilities at home (pre)	61	.29*
Parent attitude toward transfer (post)	53	.29*
SA: Academic Success and Morale (change, pre to post 2)	61	.27*
Mother's occupation	60	-.26*

[a] High scores indicate *positive* interpersonal relationships.

in their receiving-school classes than by their former peer group; and those who expressed somewhat more positive feelings about school and their own performance at the end of the posttransfer year. They are children whose parents, in the summer following that year, tended to report positive attitudes toward the transfer, for themselves and the child as well. They are children who, in the pretransfer year, were more likely to have regular duties at home, and whose mothers tended to be employed in relatively low-status occupations and/or less commonly employed outside the home.[1]

Reactions to School

Correlates of change in pupils' perceptions of the general classroom climate, as measured by the Classroom Questionnaire, appear in Table 11-10. Showing the same pattern that has emerged for most of the questionnaire scales, overall positive change on this measure is substantially correlated with change evident at the beginning of the posttransfer year and with further change thereafter, and the more substantial increases tended to occur more commonly among pupils with low pretransfer scores. Children showing the greatest positive posttransfer changes in perceived supportiveness of the classroom milieu tend to be those who saw their relationships with receiving-school peers and teachers as more satisfying than those experienced in the *de facto* segregated school; those who found greater support for learning in their receiving-school teachers; and those who expressed increased interest in school early in the posttransfer year. They are also somewhat more likely than other Negro transfer pupils to have reported increased general anxiety at that time. They tend to be children relatively free from physical and behavioral problems, in the judgment of their teachers in both school settings, and they are somewhat less likely than other Negro transfer pupils to have expressed positive feelings about the impending transfer when interviewed at the close of the pretransfer year.

They also tend to be heavier children, and to have performed somewhat less well on the 600-yard run-walk in the pretransfer fitness tests. The latter two measures are uncorrelated in the total study population, and it is likely that the correlation between weight and changed perception of the school climate is no more than a reflection of the

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[1] It will be recalled that the lowest code on the occupational scale is that reflecting nonemployment.

Table 11-10. CORRELATES OF CHANGE IN SUPPORTIVE CLASSROOM MILIEU (CQ)

Variable	n	r
CQ: Supportive Classroom Milieu (change, pre to post 1)	60	.64**
SA: Interpersonal Relationships (change, pre to post 2)	60	.46**
CQ: Supportive Classroom Milieu (change, post 1 to post 2)	60	.41**
Physical-behavioral problems (post)	58	-.39**
CQ: Motivation (change, pre to post 2)	60	.37**
CQ: Supportive Classroom Milieu (pre)	60	-.36**
Physical-behavioral problems (pre)	60	-.34**
CQ: Perception of Teacher (change, pre to post 1)	60	.34*
Weight in pounds	60	.33*
SA: Interpersonal Relationships (change, pre to post 1)	60	.31*
CQ: Perception of Teacher (change, pre to post 2)	60	.28*
GASC: General Anxiety (change, pre to post 1)	59	.28*
SA: Peer Relationships (pre)	60	.27*
Pupil attitude toward transfer (pre)	60	-.27*
Physical fitness: run-walk (pre)	59	-.26*

greater posttransfer increments on the school climate measure seen among the older Negro transfer children (Chap. 9, Table 9-3).

Overall change in perceptions of teacher supportiveness (Table 11-11), also measured by the Classroom Questionnaire, parallels to a considerable degree the presence of change in the fall and further change between fall and spring; again, the more positive changes tended to occur among pupils with initially lower scores. Change on this measure corresponds to some extent with change on the measure of general school climate discussed above. In addition, children expressing increased positive feelings about teacher support tend to be those who reported a growing interest in school during the posttransfer year, who perceived their general classroom behavior as becoming increasingly acceptable between fall and spring, and who showed some reduction in general anxiety over that period. These children are somewhat less likely than others in the group to have exhibited symptoms of serious

Table 11-11. CORRELATES OF CHANGE IN PERCEPTION OF TEACHER AS LEARNING FACILITATOR (CQ)

Variable	n	r
CQ: Perception of Teacher (change, pre to post 1)	60	.57**
CQ: Perception of Teacher (pre)	60	-.47**
CQ: Perception of Teacher (change, post 1 to post 2)	60	.46**
CQ: Motivation (change, pre to post 2)	60	.44**
CQ: Supportive Classroom Milieu (change, post 1 to post 2)	60	.34**
SA: Self-Perceived Behavior (pre)	60	.31*
CQ: Supportive Classroom Milieu (change, pre to post 2)	60	.28*
GASC: General Anxiety (change, post 1 to post 2)	57	-.27*
CQ: Motivation (change, post 1 to post 2)	60	.26*
Quay F2: Organic-Psychotic Manifestations (pre)	60	-.26*

behavior disorders during the pretransfer year, as reflected in ratings by their former teachers.

Correlates of change in the School Attitudes measure of self-perceived classroom behavior appear in Table 11-12. The typical pattern is again evident, with children showing the greatest positive changes overall tending to be those who showed increments in both the fall and spring assessments, and who had relatively low pretransfer scores. Pupils who viewed their classroom behavior as more acceptable during the posttransfer year were more likely than others in the Negro transfer group to report increased school-related anxiety, to describe their receiving-school peer relationships as more satisfying, to show increased self-esteem, and to express more positive feelings about school and about their own school performance. They tend to be children rated as physically attractive by their teachers in the *de facto* segregated school, and children for whom parents hold high educational aspirations, as this is reflected in parent answers to the question, "How many years of schooling would you like your child to have?"

Table 11-12. CORRELATES OF CHANGE IN SELF-PERCEIVED BEHAVIOR[a]

Variable	n	r
SA: Self-Perceived Behavior (change, pre to post 1)	61	.52**
SA: Self-Perceived Behavior (post 1 to post 2)	61	.51**
SA: Self-Perceived Behavior (pre)	61	-.45**
SA: School Anxiety (change, pre to post 2)	61	.40**
SA: Peer Relationships (change, pre to post 2)	61	.36**
Coopersmith: Self-Esteem (change, pre to post 2)	61	.33*
Coopersmith: Self-Esteem (change, pre to post 1)	61	.32*
Soc. Stim: Physical Attractiveness (pre)	61	.32*
Parent aspirations for child's education	47	.30*
SA: Academic Success and Morale (change, pre to post 2)	61	.29*
CQ: Anxiety (change, pre to post 1)	60	.27*
SA: School Anxiety (change, pre to post 1)	61	.26*

[a] High scores indicate more acceptable behavior, lower scores less acceptable behavior.

Anxiety

Correlates of change in school-related anxiety, as measured by the School Attitudes card sort, are shown in Table 11-13. Once more, overall change is seen to be substantially correlated with the two interim change measures and with pretransfer anxiety level, in the latter case negatively. Children showing the greatest increments in school anxiety tended also to perceive their classroom behavior as increasingly acceptable over the posttransfer year, and their peer relationships as more positive at the end of that year. They tended to be children who were rated as physically attractive by their teachers in the *de facto* segregated school. They tended to be seen by their parents as reacting favorably to the transfer (though this was not paralleled by a significant correlation with the children's own expressed reactions). They also tended to show a post-

Table 11-13. CORRELATES OF CHANGE IN SCHOOL ANXIETY (SA)

Variable	n	r
SA: School Anxiety (change, post 1 to post 2)	61	.56**
SA: School Anxiety (pre)	61	-.53**
Physical fitness: arm hang, girls (pre)	28	.52**
SA: School Anxiety (change, pre to post 1)	61	.48**
SA: Self-Perceived Behavior (change, pre to post 2)	61	.40**
SA: Peer Relationships (change, pre to post 2)	61	.35**
SA: Peer Relationships (change, post 1 to post 2)	61	.31*
Total IQ (change, pre to post 2)	61	-.30*
Parent perception of child's attitude toward transfer (post)	53	.30*
SA: Self-Perceived Behavior (change, post 1 to post 2)	61	.29*
Soc. Stim: Physical Attractiveness (pre)	61	.26*
CQ: Anxiety (change, pre to post 2)	60	.26*

transfer decline in IQ. Finally, a sizeable correlation with the bent-arm-hang fitness test for girls suggests that the greater increments in anxiety tended to occur among girls with considerable physical strength.

Pre- to posttransfer change in the above measure showed a small positive correlation with change in the Classroom Questionnaire Anxiety scale. Correlates of change for the latter measure appear in Table 11-14. Here, the typical pattern of relationships is seen between overall change, interim change (particularly as measured in the fall), and initial scores, but at that point the picture diverges sharply from that of the School Anxiety scale discussed above, and is seemingly more complex. Increased posttransfer anxiety as reflected in the present measure tends to be associated with pretransfer ratings suggestive of serious behavior disorders, with a relatively high incidence of physical and/or behavioral problems during the pretransfer year, with relatively poor acceptance by peers in the *de facto* segregated school, with increased general anxiety and frequent parent contacts with the school over the posttransfer year -- all compatible with a picture of generally maladaptive behavior. Yet these pupils tended to show a positive initial response to the transfer: early in the

Table 11-14. CORRELATES OF CHANGE IN ANXIETY (CQ)

Variable	n	r
CQ: Anxiety (change, pre to post 1)	60	.66**
CQ: Anxiety (pre)	60	-.61**
GASC: General Anxiety (pre to post 2)	58	.40**
Frequency of parent contacts with school (post)	52	.39**
CQ: Anxiety (change, post 1 to post 2)	60	.37**
"Enrichment" items in home (pre)	60	.36**
Quay F2: Organic-Psychotic Manifestations (pre)	60	.34*
Parent aspirations for child's adult career	44	.31*
No. half days absent (post)	60	-.31*
CQ: Supportive Classroom Milieu (change, pre to post 1)	60	.29*
CQ: Motivation (change, post 1 to post 2)	60	-.29*
Soc. Dist: Acceptance by Opposite-Sex Peers (pre)	60	-.29*
No. parent activities (post)	51	.28*
Crowding index	50	-.28*
CQ: Motivation (change, pre to post 1)	60	.27*
Soc. Dist: Acceptance by Peers (change, pre to post 1)	60	.27*
Soc. Dist: Acceptance by Peers (pre)	60	-.27*
Coopersmith: Self-Esteem (pre to post 1)	60	.26*
SA: School Anxiety (change, pre to post 2)	60	.26*
Physical-behavioral problems (pre)	60	.26*

posttransfer year, they tended to express somewhat greater interest in school and more positive perceptions of the receiving-school classroom climate, to be somewhat better accepted by their receiving-school classmates than by their former peer group, and to gain in self-esteem. Subsequently, however, interest in school diminished, and the early gains in other areas were not reflected in significant correlations for the year as a whole. One could speculate that anxiety may have had an initial facilitating effect which dissipated as the level of anxiety continued to increase over the post-transfer year, tending finally to negate the positive response evident in the fall.

Other significant correlates add little in the way of clarification. They indicate that children showing the greatest increments in anxiety were somewhat more likely than other Negro transfer pupils to attend school regularly during the posttransfer year, and to come from relatively uncrowded homes -- and homes where educational media and materials (radio, television, books, newspapers, magazines) were readily available; that the parents of these children tended to be socially active, and to hold high occupational aspirations for the child.

Correlates of change in general anxiety appear in Table 11-15. The typical negative relationship between initial scores and change is seen here, although the correlation is somewhat smaller than those for the two school-related anxiety measures. Correlations between overall change and interim change were not available for the GASC measure.

Table 11-15. CORRELATES OF CHANGE IN GENERAL ANXIETY (GASC)

Variable	n	r
Parent expectations for child's education	49	.44**
CQ: Anxiety (change, pre to post 2)	58	.40**
No. half days absent (post)	59	-.40**
GASC: General Anxiety (pre)	60	-.34**
"Enrichment" items in home (pre)	55	.32*
No. parent activities	51	.31*
SA: Academic Success and Morale (change, pre to post 1)	59	.30*
Frequency of parent contacts with school (post)	52	.29*
No. school activities (pre)	56	.28*
CQ: Anxiety (change, pre to post 1)	59	.27*

Change in general anxiety is seen to be moderately correlated with change on the CQ Anxiety scale, discussed above, and correlational patterns for the two measures have several points in common. As was true for the CQ measure, children showing posttransfer increments in general anxiety are likely to have attended school regularly during the posttransfer year; their parents tended to have frequent contacts with school over that period, and to be socially active; their homes tend to provide adequate resources for educational enrichment. In contrast to the CQ measure, only one school-behavior variable turned up as a correlate of change in general anxiety: children showing increased anxiety tended to express more positive feelings about school and about their own performance early in the posttransfer year. As was true of the school-behavior correlates of change on the CQ measure, this early positive finding was not reflected in a significant correlation for the year as a whole. Two other correlates appeared here which did not appear for the CQ measure, both of them positively correlated with change in general anxiety: number of school activities (e.g., safety patrol, scouts) during the pretransfer year, and high parental expectations for the child's education. The latter shows the strongest relationship to anxiety change of all variables investigated.

2. Summary

Correlations of pre- to posttransfer change in 15 behavioral variables with pretransfer measures, a few posttransfer measures, selected demographic variables, and parent interview data were determined for the Negro transfer pupils.

With the exception of reading achievement, posttransfer change on all measures showed at least moderate negative correlations with initial scores. Thus, the greatest gains in IQ tended to occur among pupils with low pretransfer IQs; the children best accepted by their receiving-school classmates tended to be those least well accepted by their peers in the de facto segregated school; the children showing the most positive changes in attitudes toward school at the end of the posttransfer year tended to be those who had expressed somewhat negative attitudes the previous year.

Where interim change was measured -- i.e., change from the pretransfer year to fall of the posttransfer year, and from fall to spring of the posttransfer year -- positive correlations of at least moderate size were consistently found between interim and overall change. Thus, pupils who showed increased self-esteem over the year as a whole tended to show increments in self-esteem in the fall, and further increments between fall and spring.

Generally speaking, the correlational patterns made logical sense. For example, children who perceived their general interpersonal relationships in school as more positive during the posttransfer year tended also to gain in self-esteem, to view the receiving-school climate as more supportive than that of the de facto segregated school, to express more positive attitudes toward school and toward their own academic performance, and to be better accepted by their receiving-school classmates than by their former peer group. Patterns for change in achievement motivation (which showed the largest correlation -- .61 -- with initial score) and in the anxiety measures tended to be somewhat less clear-cut than the others.

Change in reading achievement showed the least relationship to change in other measures. Posttransfer gain in average reading performance correlated with gain in vocabulary scores, but with only one other variable: the pretransfer "impact" rating. Gain in vocabulary scores was paralleled to some degree by increased self-esteem, by high parental expectations for the child, and by high rated "likeability" in the pretransfer year. For reading and IQ as well, posttransfer change failed to correlate significantly with change in attitudes toward school, in motivation, or in interpersonal relationships, as reflected in the measures employed here.

Demographic variables infrequently correlated with behavioral change. Parent interview data relating to expectations and/or aspirations for the child correlated positively (though in most cases not appreciably) with posttransfer increases in reading vocabulary and in self-esteem; with change in the child's perception of his behavior in school, in the direction of more acceptable behavior during the posttransfer year; with increased interest in school and increased anxiety. Favorable after-the-fact attitudes toward the transfer, as expressed by parents and/or pupils, similarly showed small positive correlations with gain in IQ and with positive change in the child's perception of his interpersonal relationships at school. Pretransfer attitudes showed little relationship to behavioral change; the one significant correlation indicated that children who perceived the receiving-school climate as more supportive than that of the *de facto* segregated school tended to be those who had expressed somewhat negative attitudes toward the transfer when interviewed the preceding spring.

Chapter 12

INTERVIEW DATA

Interviews with the transfer pupils and their parents were conducted both before and after the transfer. Pupils were encouraged to discuss their feelings about the transfer and, in the final interview, to identify those aspects of their first year's experience in a desegregated school which had particularly impressed them, either favorably or unfavorably. Parents were interviewed concerning their own and their child's reactions to the transfer, their perceptions of its impact on the child, their aspirations and expectations for the child, their feelings about school generally, and their activities vis-à-vis the child, the school, and the community.

Consideration of the interview material must be prefaced by this caution: the findings presented here represent what pupils and their parents were willing to report, to those who interviewed them.

Pupils were interviewed during individual testing sessions, as noted in Chapter 3, by examiners with whom they had had prior opportunities to become acquainted. The children referred to the examiners (who constituted a regular crew in each building) as "the testing ladies" or "testing teachers," and appeared to distinguish them readily from the regular school staff. Most children welcomed their daily appearance in the school with enthusiasm, and seemed to relate to them comfortably. The examiners reassured the children frequently as to the confidentiality of their responses, and felt that most responded quite candidly. The fact remains, nonetheless, that the examiners were functioning within the school setting, and this fact cannot be discounted as a possible influence on what children were willing to report about their feelings.

Parents were interviewed by school social workers -- where possible, by someone who had already established a relationship with the family. As with the children's responses, responses of parents were felt by the interviewers to be generally frank. It is inevitable, however, that these responses were influenced to some extent by parents' general attitudes toward the schools and school personnel, as well as by reactions to a particular interviewer.

On that point, it should be noted further that all examiners, and all but one of the family interviewers, were white.

In the case of the latter, the choice was a matter of which social workers with a special interest in this project were available for summer employment as interviewers. In the case of the testing personnel, the choice was dictated by the need to simulate as nearly as possible actual classroom conditions, so as to elicit "typical" responses in the testing sessions; at that time, there were relatively few black teachers in the school system. In view of the fact that most of the transfer families were Negro, and given the evidence that Negroes respond differently to others of their race than to whites, at least in certain kinds of testing situations (e.g., see Katz, Henchy, & Allen, 1968), the race of the interviewers must be considered another possible influence on the interview data.

Because most of the data presented here deal with comparative pre- and posttransfer findings, only data for the pupils and families who remained in the sample for the entire period of the study were included. The one exception involves the correlations presented for the pre- and posttransfer years, which were computed from data for all families represented in the sample at those particular periods.

1. General Attitudes Toward the Transfer

Pre- and posttransfer attitudes toward the transfer, and their correlates, are described below. Included are the attitudes and reactions of pupils, as they expressed them and as their parents perceived them, and the parents' own attitudes and reactions.

Pupil Attitude

Pre- and posttransfer attitudes expressed by the transfer pupils are reported in Table 12-1. It can be seen that a substantial majority (70%) of the pupils expressed positive expectations in the pretransfer interview, and that nearly as many expressed positive reactions early in the posttransfer year and at the end of that year. Shifts from the pretransfer attitudes are seen primarily as shifts from positive or negative expectations to more "neutral" feelings, particularly at the beginning of the posttransfer year.

White transfer pupils (and white boys in particular) tended to express somewhat less positive expectations for the transfer, but responded more positively at the end of the posttransfer year than Negro pupils, 20 percent of whom ex-

Table 12-1. PUPIL ATTITUDE TOWARD THE TRANSFER: PRE-[a] AND POSTTRANSFER YEARS

	Positive						Neutral						Negative					
	PRE		POST 1		POST 2		PRE		POST 1		POST 2		PRE		POST 1		POST 2	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
By subgroup:																		
White boys	5	50	7	64	9	82	1	10	4	36	2	18	4	40	0	0	0	0
Negro boys	31	76	29	66	29	66	5	12	11	25	7	16	5	12	4	9	8	18
White girls	3	75	3	75	3	75	0	0	0	0	1	25	1	25	1	25	0	0
Negro girls	33	69	34	67	32	63	5	10	11	22	8	16	10	21	6	12	11	22
By race:																		
White	8	57	10	67	12	80	1	7	4	27	3	20	5	36	1	7	0	0
Negro	64	72	63	66	61	64	10	11	22	23	15	16	15	17	10	11	19	20
By sex:																		
Boys	36	71	36	65	38	69	6	12	15	27	9	16	9	18	4	7	8	15
Girls	36	69	37	67	35	64	5	10	11	20	9	16	11	21	7	13	11	20
By grade:																		
K-1	25	78	31	82	27	71	4	12	2	5	6	16	3	9	5	13	5	13
2-3	28	72	30	75	25	62	3	8	8	20	6	15	8	20	2	5	9	22
4-5	19	59	12	38	21	66	4	12	16	50	6	19	9	28	4	12	5	16
Total	72	70	73	66	73	66	11	11	26	24	18	16	20	19	11	10	19	17

[a] Note that pretransfer _n_'s are smaller, as a result of missing data for 7 pupils.

pressed negative reactions at that time. Boys and girls did not differ appreciably in their reactions. Younger pupils (grades K-1) tended to express somewhat more positive feelings than older children, both before and after the transfer; pupils in grades 4-5 expressed less enthusiasm for the transfer beforehand and early in the posttransfer year, but at the end of that year their reactions did not differ appreciably from those of pupils in the lower grades.

Pre- to posttransfer change in the attitudes expressed by pupils is summarized in Table 12-2. About half the group showed no change in attitude, most being pupils who expressed positive attitudes initially and continued to express similar attitudes in the posttransfer year. The other half is seen to be about equally divided between pupils reporting more positive and less positive reactions during the posttransfer year.

Correlates of pupil attitude toward the transfer appear in Table 12-3. As was reflected also in the grade distributions shown in Table 12-1, the more positive pretransfer expectations tended to be expressed by the younger transfer

Table 12-2. CHANGE IN PUPIL ATTITUDE TOWARD THE TRANSFER: PRE- TO POSTTRANSFER YEAR

Direction of change	Pre-post 1		Post 1-post 2		Pre-post 2	
	n	%	n	%	n	%
More positive	22	21	28	25	23	22
Less positive	22	21	27	25	26	25
No change: positive	51	50	48	44	48	47
No change: neutral	4	4	6	5	3	3
No change: negative	4	4	1	1	3	3

Note.--In this and subsequent tables reporting change in attitude, a positive change is defined as a change from negative to neutral feelings, or from neutral to positive feelings. A negative change is defined similarly as a change from positive to neutral feelings, or from neutral to negative feelings.

pupils. The physical fitness correlate may likewise be largely a function of age difference, inasmuch as chronological age shows a substantial negative correlation with shuttle-run completion time ($\underline{r} = -.67$) in the study population as a whole.

Attitudes expressed at the end of the posttransfer year show no systematic relationship to age. Here, peer relationships seem to be a primary factor: children expressing the more positive posttransfer attitudes tend to be those who perceived their peer relationships in the receiving school as satisfying, and who were relatively well accepted by their receiving-school classmates. They also tend to be children reporting some degree of school-related anxiety at the end of the posttransfer year, and positive feelings about school and their own academic performance that year; children with limited participation in church and community programs; children with few siblings. The latter two correlates, though representing only small relationships here, might suggest that the child expressing the more positive attitudes toward the

Table 12-3. CORRELATES OF PUPIL ATTITUDE TOWARD THE TRANSFER

Variable	n	r
PRETRANSFER ATTITUDE:		
Physical fitness: shuttle run	80	.35**
Chronological age	151	-.29**
POSTTRANSFER ATTITUDE:		
SA: Peer Relationships	94	.30**
Soc. Dist: Acceptance by Opposite-Sex Peers	117	.26**
SA: School Anxiety	94	.23*
SA: Academic Success and Morale	94	.21*
Soc. Dist: Acceptance by Peers	117	.21*
No. organized nonschool activities	103	-.21*
No. siblings	117	-.19*

Note.--In this and subsequent tables, all variables are pupil variables unless otherwise noted. Pretransfer correlates are other pretransfer measures; posttransfer correlates are other posttransfer measures.

transfer is one who depends heavily on the school for peer companionship, and who found an acceptable degree of such companionship in his receiving-school class.

Parent Perception of Pupil Attitude

Pupils' attitudes toward the transfer as their parents reported them are summarized in Table 12-4. Generally speaking, parents of the transfer pupils perceived their children's attitudes as somewhat more positive than the children themselves reported. This was particularly true at the end of the posttransfer year, when 92 percent of the parents reported positive attitudes for their children, compared to 66 percent in the children's own reports. The data here reflect a shift toward more positive attitudes at the end of posttransfer year that was not evident in the reports of pupils. That general finding tends to be a consistent one across race, sex, and grade groups.

Change in parent perceptions of pupil attitude (Table 12-5) reflect clearly the upward shift at the end of the posttransfer year referred to above. Some 22 percent of the parents saw their children as holding more positive attitudes toward the transfer at this time than was reported in the pretransfer interviews, corresponding percentagewise to positive changes reflected in the children's reports. However, only 8 percent of the parents reported their children's attitudes to be less positive at the end of the posttransfer year, while a fourth of the children's reports showed a change in that direction. Compared with what pupils said about their own attitudes, more of the parents reported positive attitudes for their children both before and after the transfer (69% compared with 47%); somewhat fewer parents indicated unchanged neutral or negative attitudes for their children (1% compared with 6%).

Correlates of parent-perceived child attitudes toward the transfer are shown in Table 12-6. Parents' own attitudes toward the transfer, and toward school in general, are seen to be importantly related to the attitudes they attributed to their children, in both the pre- and posttransfer years. Parents whose own attitudes were positive tended to perceive their children as holding similarly positive attitudes. On the other hand, the attitudes reported by the children themselves showed no systematic relation to the attitudes their parents reported for them, in either the pre- or posttransfer year.

Table 12-4. PARENT PERCEPTION OF PUPIL ATTITUDE TOWARD THE TRANSFER: PRE-[a] AND POSTTRANSFER YEARS

	Positive				Neutral				Negative			
	PRE		POST		PRE		POST		PRE		POST	
	n	%	n	%	n	%	n	%	n	%	n	%
By subgroup:												
White boys	9	82	8	89	1	9	1	11	1	9	0	0
Negro boys	31	86	37	95	4	11	1	3	1	3	1	3
White girls	2	50	4	100	1	25	0	0	1	25	0	0
Negro girls	29	74	41	89	3	8	0	0	7	18	5	11
By race:												
White	11	73	12	92	2	13	1	8	2	13	0	0
Negro	60	80	78	92	7	9	1	1	8	11	6	7
By sex:												
Boys	40	85	45	94	5	11	2	4	2	4	1	2
Girls	31	72	45	90	4	9	0	0	8	19	5	10
By grade:												
K-1	27	87	30	88	2	6	1	3	2	6	3	9
2-3	23	72	35	95	5	16	1	3	4	12	1	3
4-5	21	78	25	93	2	7	0	0	4	15	2	7
Total	71	79	90	92	9	10	2	2	10	11	6	6

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[a] Here and in subsequent tables reporting parent interview data, pre- and posttransfer *n*'s vary according to the number of families available for interviews.

Table 12-5. CHANGE IN PARENT PERCEPTION OF PUPIL ATTITUDE TOWARD THE TRANSFER: PRE- TO POSTTRANSFER YEAR

Direction of change	n	%
More positive	17	22
Less positive	6	8
No change: positive	54	69
No change: neutral	0	0
No change: negative	1	1

Correlates of parent-perceived pretransfer attitudes include the one physical fitness measure employed only with boys, a greater proportion of whom (relative to girls) were seen by their parents as holding positive expectations for the transfer. Parents reporting greater community involvement for themselves (social, church, school, and community activities) likewise tended to perceive their children's pretransfer attitudes more positively.

The pattern of posttransfer correlates for parent-perceived pupil attitude is an interesting one. In general, the more positive pupil attitudes tended to be ascribed to those children whose own responses to the special tests and inventories were suggestive of both personal satisfaction and the wish to do well in the receiving-school setting, and whose receiving-school teachers perceived them as likeable youngsters conforming in their behavior to middle-class standards. These children likewise tend to be children with few siblings, children whose parents are employed in relatively low-status occupations and hold high educational aspirations for their child.

Parent Attitude

Parents' own attitudes toward the transfer are summarized in Table 12-7. While a majority of the parents in nearly all categories reported positive feelings about the transfer, both beforehand and at the end of a year of desegregated schooling, parent response tended to be somewhat less positive than pupil response. This was particularly true for the pretransfer year, when only 55 percent of the parents expressed positive expectations for the transfer, compared with 70 percent of the pupils. An even greater contrast is apparent in the pretransfer parent attitudes and parent-perceived child attitudes, with 79 percent of the latter positive. At the end of the posttransfer year, somewhat more parents reported positive or neutral attitudes, while substantially fewer -- 20 percent, compared with 34 percent -- expressed negative reactions.

In the pretransfer year, parents of white children tended to report more positive expectations than parents of Negro

Table 12-6. CORRELATES OF PARENT PERCEPTION OF PUPIL ATTITUDE TOWARD THE TRANSFER

Variable	n	r
PRETRANSFER ATTITUDE:		
Parent attitude toward the transfer	109	.45**
Physical fitness: pull-ups, boys	35	.34*
No. parent activities	107	.31**
Parent attitude toward school	104	.27**
POSTTRANSFER ATTITUDE:		
Parent attitude toward the transfer	106	.53**
Parent attitude toward school	106	.46**
[a]SA: Interpersonal Relationships	85	.35**
SA: School Anxiety	85	.34**
CQ: Motivation	68	.33*
Lambert-Bower: no. "happy" choices	38	.32*
No. siblings	106	-.30**
Parent aspirations for child's education	93	.28**
Coopersmith: Self-Esteem	68	.25*
Father's occupation	90	-.24*
Quay F1: Deceit	106	-.24*
Quay F8: Low superego influence	106	-.23*
Soc. Stim: Likeability	106	.23*
Mother's occupation	105	-.22*
McNeil: Aggression	106	-.22*
Quay F6: Aggression	106	-.22*

[a] The word "negative" is omitted from the scale title here and in the tables which follow, so that the scale direction can be read properly in relation to the correlations. High scores on the scale indicate positive interpersonal relationships.

Table 12-7. PARENT ATTITUDE TOWARD THE TRANSFER: PRE- AND POSTTRANSFER YEARS

	Positive				Neutral				Negative			
	PRE		POST		PRE		POST		PRE		POST	
	n	%	n	%	n	%	n	%	n	%	n	%
By subgroup:												
White boys	7	64	3	33	0	0	3	33	4	36	3	33
Negro boys	24	57	26	67	6	14	8	20	12	29	5	13
White girls	3	75	4	100	0	0	0	0	1	25	0	0
Negro girls	23	49	28	61	6	13	6	13	18	38	12	26
By race:												
White	10	67	7	54	0	0	3	23	5	33	3	23
Negro	47	53	54	64	12	13	14	16	30	34	17	20
By sex:												
Boys	31	58	29	60	6	11	11	23	16	30	8	17
Girls	26	51	32	64	6	12	6	12	19	37	12	24
By grade:												
K-1	19	51	18	53	4	11	8	24	14	38	8	24
2-3	21	58	24	65	4	11	6	16	11	31	7	19
4-5	17	55	19	70	4	13	3	11	10	32	5	19
Total	57	55	61	62	12	12	17	17	35	34	20	20

children. At the end of the posttransfer year, this pattern had reversed, with a relatively larger fraction of the Negro parents reporting favorable reactions. A similar (though slight) reversal is evident among the parents of boys and of girls, the former reporting somewhat more positive initial attitudes than the latter, and slightly less positive attitudes at the end of the posttransfer year. Parents of white boys, in fact, reported less positive feelings about the transfer at that time than they had expressed beforehand. Parents of the younger transfer pupils (grades K-1) showed somewhat less positive attitudes, both before and after the transfer, than parents of older children -- perhaps reflecting a greater concern about busing young children away from the home neighborhood.

Changes in parent attitude toward the transfer, as reflected in the views expressed in pre- and posttransfer interviews, are reported in Table 12-8. Slightly more parents than pupils showed a change toward more positive attitudes, while somewhat fewer parents than pupils reported less positive feelings at the end of the posttransfer year. A substantial number of the parents (42%) reiterated their initially positive attitudes at that time, but somewhat more parents than pupils -- 10 percent, as compared to 3 percent -- maintained their initially negative feelings.

Correlates of the parents' expressed attitudes toward the transfer are shown in Table 12-9. As was suggested by the data for parent-perceived pupil attitudes, parents' own attitudes showed strong relationships to the attitudes they believed their children held, and to the parents' general attitudes toward school. Parent-perceived pupil attitude proved to be of similar importance in relation to pre- and

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Table 12-8. CHANGE IN PARENT ATTITUDE TOWARD THE TRANSFER: PRE- TO POSTTRANSFER YEAR

Direction of change	n	%
More positive	28	30
Less positive	13	14
No change: positive	39	42
No change: neutral	3	3
No change: negative	9	10

Table 12-9. CORRELATES OF PARENT ATTITUDE TOWARD THE TRANSFER

Variable	n	r
PRETRANSFER ATTITUDE:		
Physical fitness: total points	21	.50*
Parent perception of child attitude toward the transfer	109	.45**
Teacher prediction of posttransfer adjustment	126	.36**
Soc. Stim: "Impact"	128	.35**
Soc. Stim: Cleanliness and grooming	129	.34**
No. parent-child activities	127	.32**
Physical fitness: shuttle run	76	-.30**
Soc. Stim: Leadership	129	.29**
Physical fitness: run-walk	70	-.29*
Coopersmith: General Classroom Adjustment	129	.28**
Quay F7: Passivity	129	-.27**
Parent attitude toward school	124	.27**
Soc. Dist: Acceptance by Peers	130	.25**
Total IQ	128	.24**
SA: School Anxiety	82	.24*
No. parent activities	127	.22*
CQ: Supportive Classroom Milieu	82	.22*
McNeil: Self-Satisfaction	128	.22*
No. school activities	127	.21*
Quay F3: Neurotic Behavior	129	-.20*
Soc. Dist: Acceptance by Same-Sex Peers	130	.20*
Soc. Stim: Physical Attractiveness	129	.20*
Quay F5: Distractibility	129	-.19*
Soc. Stim: Likeability	128	.19*
Quay F4: Immaturity	129	-.18*
POSTTRANSFER ATTITUDE:		
Parent attitude toward school	107	.74**
Parent perception of child attitude toward the transfer	106	.53**
Nonverbal IQ	44	-.48**
Parent aspirations for child's education	93	.45**
No. siblings	107	-.36**
Verbal IQ	44	-.34*
Height in inches	85	.31**
Weight in pounds	84	.25*
Quay F5: Distractibility	107	.23*
No. parent activities	106	.22*
Father's occupation	91	-.22*
Mother's education	106	-.21*
Crowding index	94	-.20*

posttransfer parent attitudes, while general attitude toward school showed much the strongest relationship ($\underline{r} = .75$) to parent reactions following a year of desegregated schooling.

Several of the physical fitness measures for pupils turned up as pretransfer correlates of parent attitude toward the transfer, the largest correlation occurring with total fitness points, scored only for children in the upper elementary grades (see Chap. 5). The direction of the relationships here shows high performance levels on the fitness tests to be associated with positive parent attitudes. It will be recalled that chronological age differences were suspect in the correlation reported earlier between fitness and pupils' pretransfer attitudes, and age may be a factor in the relationships seen here as well, although the evidence for it is less impressive: compared to the attitudes expressed by parents of the youngest transfer pupils (grades K-1), a slightly higher proportion of the parents of middle- and upper-grade children reported positive pretransfer attitudes, and a slightly smaller proportion reported negative pretransfer attitudes. Grade-to-grade differences are not large in this case, however, and within the four-year span represented by grades 2-5, proportions of positive, neutral, and negative parent responses are about the same. It may be, then, that physical fitness of the child is legitimately related to parents' initial attitudes toward the transfer, although other measures that might give substance to such a picture (e.g., a lower incidence of reported health problems) did not appear as correlates of parent attitude.

In other respects, the pattern of correlations here is not dissimilar from the posttransfer pattern for parent-perceived pupil attitude. The more positive pretransfer attitudes tended to be expressed by parents whose children were seen by their teachers as demonstrating positive impact and acceptable behavioral adjustment in the *de facto* segregated school, and as likely to adjust well in the receiving school; children well accepted by their peers; children showing relatively high academic aptitude and drive; children who appeared to find satisfaction in their school experience. Positive attitudes toward the transfer likewise tended to be expressed by parents who, in the pretransfer year, reported sharing many activities with their children, who were themselves active in the community, and whose children were participants in extracurricular activities at the *de facto* segregated school.

Correlates of parents' posttransfer attitudes reflect almost nothing of the above picture, except the very prominent correlations with parents' general attitudes toward school and their perceptions of the attitudes held by their children toward the transfer. The posttransfer attitudes of parents showed little relationship to pupil characteristics, the most prominent being the negative correlations with verbal and nonverbal IQ. These correlations, based on upper-grade children only (see Chap. 6), might suggest a slight tendency for parents of the older, less able transfer pupils to have perceived the transfer as most beneficial. Some support for this is seen perhaps in the positive correlations between parent attitude and pupils' height and weight; the latter two measures showed small but significant positive correlations with chronological age ($\underline{r}$ = .09 and .06, respectively) in the study population as a whole. The only pupil-behavior correlate in this case shows a small relationship between teachers' ratings of distractibility in the child and positive parent attitudes.

Parents expressing the more positive posttransfer attitudes tended also to be relatively active in the community, to have small families, and to live in relatively uncrowded housing. The fathers tended to be employed in relatively low-status occupations and the mothers to be somewhat less well educated than other transfer mothers -- both findings relevant, perhaps, to the high educational aspirations expressed by these parents for their children.

2. Reactions to Specific Aspects of the Transfer

At the end of the posttransfer year, pupils and their parents were asked not only about their general attitudes toward the transfer, but also for comments about those aspects of the transfer they found most and least desirable. Their responses are summarized categorically in Table 12-10 and discussed below.

Pupil Reactions

The two categories drawing the heaviest positive response from pupils were the physical facilities (28%) and educational program (27%) in the receiving schools. Pupils whose responses were classified in the latter category most often named particular subject-matter areas (arithmetic, reading, music, gym, art) that they liked better in the new school. Pupils commenting about school facilities responded to the attractiveness of the buildings, to better library facilities and lavatories, to bigger playgrounds and more grass ("it's kind of in the country"), to drinking fountains in the classroom and no steps to climb; a few commented on building maintenance

Table 12-10. ASPECTS OF THE DESEGREGATED-SCHOOL EXPERIENCE LIKED BEST AND LEAST BY TRANSFER PUPILS AND PARENTS

	Liked best				Liked least			
	Pupils		Parents		Pupils		Parents	
Characteristic	n	%	n	%	n	%	n	%
Curriculum (content, aids, activities, achievement level of new school)	29	27	26	26	16	10	1	1
Staff (teacher, principal, janitor)	12	11	17	17	1	1	4	4
Facilities (building and grounds, equipment)	30	28	0	0	15	14	0	0
School climate (atmosphere, friendliness)	0	0	6	6	0	0	2	2
Peer group (racial composition, friends, fighting)	14	13	5	5	14	13	0	0
Busing (including lunch program at school)	6	6	0	0	6	6	30	31
All, compared to *de facto* segregated school	2	2	6	6	0	0	0	0
None, compared to *de facto* segregated school	16	15	12	12	54	50	28	29
Don't know or no response	0	0	26	26	1	1	33	34

("the windows here open and close," "the doors stay clean").

Both peers ("kids are more friendly," "not so many colored kids") and teachers ("they let you in when it rains") in the receiving schools were singled out for favorable comment by more than 10 percent of the transfer pupils; a few cited the daily bus ride as the high point of the year. None responded directly to the school climate -- either positively or negatively -- although a positive response to this aspect of the receiving-school experience was often implicit in comments assigned to other categories. Fifteen percent of the children, all but one of them black, found nothing in their new school experience which they preferred over the *de facto* segregated school; two children, both black, said they liked everything about the new school better.

The most frequent response to a question about what pupils found least desirable about the transfer was "nothing."

Fifty percent of the transfer children indicated that they found their new school experience more satisfying in every respect, while none gave the opposite response favoring the prior year's experience in all respects. Building facilities and peers drew the heaviest negative response (14% and 13%, respectively). Comments about facilities tended to be highly personalized: "don't know where to go if there's a tornado -- no basement," "can't make cupcakes at the new school," "too much mud outside," "at Jones we could stand by the heater." One particularly poignant response, classified here in the absence of a better place to put it, was "Jones School had a little bowl of fish; the new school doesn't." Negative response to peer relationships in the new school included such comments as "the kids are bossy and mean," "I miss my friends," "too many fights."

The only other category drawing any appreciable negative response from pupils was school program (10%), where most of the comments referred to specific subject-matter areas which the children said they enjoyed less, or found harder, or there was not enough of (recess, particularly), in the new school. A few children expressed negative reactions to busing, indicating that they lived too far from school and from their classmates; only one child indicated a less favorable response to the receiving-school staff.

Parent Reactions

Favorable response from parents most often concerned the educational program (26%) and the staff (17%) of the receiving school. Positive comments about the program, as summarized by the interviewers, included "the work is harder but he liked it that way," "my child has a greater desire to learn," "better materials and keener competition," "he's doing better in reading," "the children seemed to learn that learning really is good for them." Positive comments about the staff focused on the special attention and interest shown by teachers, and on discipline ("teachers at the new school maintain better order in the classroom").

A few parents singled out the receiving-school climate and peer group for favorable comment. Classified in the former category were such responses as "there's a good climate for learning at the new school," and "my child never missed a day; at Jones he was always saying he was sick and didn't want to go." About receiving-school peers, parents had these things to say: "I like having my kids know children from a higher income level," "my kids are with kids that behave better now," "there has hardly been a week when one of the kids wasn't invited somewhere for lunch," "finally he has some white friends."

The physical facilities of the receiving schools clearly mattered much less to parents than to pupils. No parent responded to school facilities as either the most or the least desirable change accomplished by the transfer. And, predictably, no parent saw the busing as the most desirable result.

A small number of parents (12%), most of them Negro, found nothing about the desegregated-school experience that they considered more beneficial than the experience provided their children in the _de facto_ segregated school. Half that number, all Negro, judged their children's experience in the new school to be preferable in every way.

Negative response from parents focused most strongly on busing, with 31 percent reporting this to be the least desirable feature of the transfer. Parents of the youngest pupils (grades K-1) expressed this reaction somewhat more frequently than parents of children in the middle and upper grades. Representative comments include "something has to be done about the fighting on the bus," "it makes the day so long and the schedule is not very reliable," "white kids should be bused if there is to be any further busing."

Four parents reported an unfavorable response to the receiving-school staff, some feeling that the transfer pupils were treated unfairly or were less well understood by their receiving-school teachers, and one commenting that student teachers were used too much. One or two parents indicated a negative response to the receiving-school climate ("they expect too much of kids") and program ("the math goes too fast").

More than a fourth of the parents (29%) found nothing about their child's experience in the desegregated school that suffered by comparison with the _de facto_ segregated school; none gave the opposite response.

Because of the generally high level of concern about busing, in this community and elsewhere, parents were asked to comment specifically on their reactions to a year of busing (Table _12-11_). Among the 14 white parents whose children were bused, about two thirds reported no strong feelings one way or the other; two parents reported generally positive reactions to the busing, and three, negative reactions. Relatively few Negro parents expressed neutral attitudes; close to half viewed the busing experience negatively, and about a third viewed it positively. The greater incidence of negative response among the Negro parents may reflect an attitude expressed in one of the comments reported earlier: a sense of the inequity of one-way busing, which places the burden of desegregation on the black child.

In other comments about the mechanics of the transfer, 91 families (79%) indicated that they had received adequate advance information about the proposed step and its implementation. Asked who was most helpful in this regard, 86 percent identified the schools as their primary source. Some named other sources as equally helpful or more so: the local newspaper (16%), churches and community agencies (12%), and local civil rights organizations (10%).

3. Impact of the Transfer

Comparisons of pre- and posttransfer interview data permitted some inferences about the initial impact of the transfer on parents' attitudes toward, and involvement with, school. In the posttransfer interviews, similarly, parents were asked whether they had observed any important changes in their children during the first year of desegregated schooling, and the nature of those changes. These data are summarized below.

Table 12-11. PARENT REACTION TO BUSING

Group	Positive		Neutral		Negative	
	n	%	n	%	n	%
White	2	14	9	64	3	21
Negro	26	32	21	26	34	42

Impact on Pupil Behavior

Parent perceptions of posttransfer changes in their children are reported in Table 12-12, where they are listed in descending order by the number of parents commenting.

Table 12-12. PARENT PERCEPTION OF POSTTRANSFER BEHAVIOR CHANGE IN THE CHILD

	Improved				No change				Deteriorated			
	White		Negro		White		Negro		White		Negro	
Behavior Change Reported	n	%	n	%	n	%	n	%	n	%	n	%
Relationships with other children	1	6	25	29	15	94	56	66	0	0	4	5
Behavior at home	2	13	14	16	13	87	65	76	0	0	6	7
Relationship with teacher	1	6	29	35	15	94	52	63	0	0	2	2
Academic performance	5	62	38	88	2	25	4	9	1	12	1	2
Interest in school	3	100	30	81	0	0	1	3	0	0	6	16
Personal characteristics (independence, neatness, etc.)	5	100	23	77	0	0	2	7	0	0	5	17

Note.--Numbers of white and Negro parents responding vary from row to row; n's represent the number volunteering information about a particular change (see text). Percentages in each category are based on the number of respondents for that particular behavior characteristic, not on the total sample n's.

Nearly all parents had something to say about their child's behavior at home, and about his relationships with peers and teachers in the new school. The majority, however, including nearly all of the white parents, indicated no evident change in these characteristics. Reported changes were most frequently in the direction of improvement, and strikingly so for the perceived relationships of Negro pupils with their teachers and peers.

Many fewer parents commented about the impact of the transfer on the child's academic performance, interest in school, and personal traits, but strong majorities of those who did indicated improvement. Improved academic performance was reported with relatively greater frequency by the Negro parents; only one white child and one Negro child were perceived by their parents as doing less well academically at the end of the posttransfer year. The few white parents who commented on their child's interest in school and his personal characteristics all reported improvement in these areas.

Reports of undesirable changes were almost nonexistent for white transfer pupils, and were limited to generally small fractions of the Negro transfer group: for none of the categories did more than a half-dozen Negro parents report undesirable changes in their children.

Distributions of reported changes were generally similar for boys and girls. An exception was noted in relationships with peers, where more girls than boys (34% as compared with 18%) were reported to have shown improvement. The only other exception involved personal characteristics: more girls than boys (90% as compared with 60%) were seen to have improved in this respect, while more boys than girls (20% as compared with 5%) showed undesirable changes. The largest number of comments in this category had to do with personal appearance.

Impact on Parent-School Interaction

Comparisons of pre- and posttransfer parent reports of participation in school activities indicated that 85 percent of the 78 parents interviewed on both occasions took part in a greater number of such activities during the posttransfer year. The remaining 15 percent showed no change in participation from the pretransfer to the posttransfer year. In the pretransfer interviews, involving 104 parents, 62 (60%) reported that they had attended no school functions during that year. At the end of the posttransfer year, all but 3 of the 100 parents interviewed reported attending at least one activity in the receiving school.

Parents' general attitudes toward school, as reflected in the pre- and posttransfer interviews, showed no systematic change at the end of the posttransfer year. Some 66 percent of the parents reported generally positive attitudes toward school in both interviews; 20 percent showed a positive change in attitude at the end of the posttransfer year, while the remaining 14 percent reported less positive attitudes then than in the pretransfer interview.

4. Aspirations and Expectations for the Transfer Pupil

Parents' educational aspirations and expectations for the transfer pupils were explored in the final interview. Three questions were asked, concerning the educational level parents hoped the child would attain, the level they expected him to attain, and the minimum level they felt he must attain. Parents were also asked about their occupational aspirations for the child, and as reported in Chapter 11, this variable showed small positive correlations with posttransfer change in pupil motivation and anxiety, as measured by the Classroom Questionnaire. A good many parents, however, indicated that they would like their child to pursue his own choice of occupation, whatever that might be -- a response which could not be coded meaningfully on the occupational-status scale. For that reason, the measure will not be examined further here.

Parent responses to the three questions concerning the child's education are summarized in Table 12-13. All parents interviewed indicated the hope that their child would complete high school, at least, and all expressed the belief that a high school education was the minimum the child must have. All of the white parents, and all but a few of the Negro parents, expected their transfer children to graduate from high school. Nearly a third of the white parents felt a college degree was essential, compared to 15 percent of the Negro parents. Expectations for college graduation did not differ appreciably in the two groups. Relatively more of the Negro parents, however, aspired to a college degree for their children (65% as compared to 50%). Only three parents reported aspirations beyond a college degree, and none expected their children to attain that higher level.

As would be expected, parent responses to the three questions are positively correlated: those reporting high

Table 12-13. PARENT EDUCATIONAL ASPIRATIONS AND EXPECTATIONS FOR THE TRANSFER PUPIL

	Aspiration				Expectation				Minimum			
	White		Negro		White		Negro		White		Negro	
Educational Level	n	%	n	%	n	%	n	%	n	%	n	%
8th grade or below	0	0	0	0	0	0	0	0	0	0	0	0
Some high school	0	0	0	0	0	0	3	4	0	0	0	0
High school graduate	4	29	21	28	6	38	40	49	7	44	59	69
Some training beyond high school	2	14	3	4	4	25	5	6	4	25	13	15
College graduate	7	50	48	65	6	38	34	42	5	31	13	15
Postgraduate college training or professional degree	1	7	2	3	0	0	0	0	0	0	0	0

Note.--Numbers of white and Negro parent responses vary across categories; not all parents responded to each of the three questions.

educational aspirations for the child tend to have high expectations as well ($\underline{r}$ = .65), and to set higher minimum educational standards ($\underline{r}$ = .38). The latter response failed to correlate significantly with posttransfer change in any of the pupil characteristics examined (Chap. 11). Parent aspiration, however, was found to correlate with change in self-perceived classroom behavior; parent expectation correlated with posttransfer change in vocabulary scores, in self-esteem as measured by the Coopersmith inventory, and in general anxiety. All correlations were positive.

While an inquiry into parent aspirations and expectations is not a primary focus of this report, it is worth noting here that all three measures correlated positively with parent education and occupation, and with the child's posttransfer IQ and reading scores, and negatively with the number of children in the family and with the crowding index. The highest educational aspirations and expectations, thus, tended to be expressed by parents who themselves were relatively well educated and were employed in relatively high-status occupations; parents with relatively few children and uncrowded living arrangements; parents whose transfer child or children tended to demonstrate an adequate level of academic accomplishment at the end of the posttransfer year. As was seen earlier in this chapter, these parents also tended to express the most positive attitudes toward the transfer, and toward school in general.

5. Summary

Bearing in mind that interview data must be interpreted cautiously, in that it represents only what those interviewed are willing to report, the data presented here indicate that a majority of the transfer pupils and their parents held favorable expectations for the transfer (70% and 55%, respectively), and reported favorable reactions following the first year of desegregated schooling (66% and 62%, respectively). Fewer pupils than parents (19% as compared with 34%) expressed negative attitudes prior to the transfer, and negative response in both groups tended to diminish over the posttransfer year, with 17 percent of the pupils and 20 percent of the parents expressing unfavorable reactions at the end of that year. Parent attitude toward the transfer was found to be substantially correlated with general attitude toward school, with parent perception of the child's attitude toward the transfer (but not with the attitudes reported by the children themselves), and with educational aspirations for the child.

Pupils' attitudes as they reported them were somewhat less positive than the attitudes ascribed to them by their parents; this was particularly true at the end of the posttransfer year, when 92 percent of the parents reported their children's attitudes toward the transfer to be positive, as compared with 66 percent of the pupils' reported reactions. Positive response was somewhat more frequent among the youngest children (grades K-1) and somewhat less frequent among the parents of those children. Negro children showed some tendency to express more positive attitudes prior to the transfer, and less positive attitudes after a year in the receiving school, than white children. The reverse was true for white and Negro parents, the latter tending to report less favorable attitudes than white parents beforehand, and more favorable reactions at the end of the posttransfer year.

Pupil reactions to specific aspects of the transfer showed the strongest positive response to the facilities (28%) and educational program (27%) of the receiving school. School facilities also drew the greatest negative response from pupils (14%), most comments here being highly personalized reactions to the absence of some feature they had especially liked in the _de facto_ segregated school. Nearly as many pupils (13%) expressed negative reactions relative to peer relationships in the receiving schools, but an equivalent number expressed positive reactions in that category. Half the children found nothing in their posttransfer experience that suffered by comparison with the _de facto_ segregated school; 15 percent, however, reported that there was nothing about the new school that they preferred over their former neighborhood school.

Parent reactions to specific aspects of the transfer showed the strongest positive response to the educational program (26%) and staff (17%) of the receiving school. The only unfavorable reaction occurring with any frequency among parents was to the busing (31%). Negro parents tended to be somewhat more opposed to the busing than white parents (42% as compared with 21%); some of their comments suggested that this was in part a negative reaction to one-way busing. More than a fourth of the parents found nothing about the transfer less desirable than attendance at the _de facto_ segregated school; 12 percent saw the transfer as offering no advantage over the former neighborhood school.

Asked about the impact of the transfer on their children, nearly all parents who had observed behavior changes reported improvement. Improved academic performance and interest in school were reported by the greatest number of parents;

improved behavior at home was least often mentioned. Unfavorable changes were infrequent, according to the parents' reports.

Parents reported greater participation in school activities (e.g., attendance at parent meetings) during the posttransfer year than they had reported for the pretransfer year. Sixty percent reported that they had attended no school function during the pretransfer year; only 3 percent reported nonattendance for the posttransfer year. Parents' general attitudes toward school showed no systematic change at the end of the posttransfer year: 20 percent reported a more positive attitude at that time and 14 percent a less positive attitude; the remaining 66 percent reported positive attitudes in both the pre- and posttransfer interviews.

Parents' reported educational aspirations and expectations for the transfer pupils indicated that all parents hoped their children would graduate from high school, and believed this to be the minimum amount of education their children must have. All of the white parents, and nearly all of the Negro parents, expected their children to attain this goal. Relatively more white parents than Negro parents (31% as compared with 15%) felt that a college degree was essential for the child; relatively more Negro parents (65% as compared with 50%) expressed the hope that their children would attain that goal.

Chapter 13

SUMMARY AND DISCUSSION

A few days ago, upon learning that this report was nearing completion, an acquaintance asked, "Well, what's the verdict -- does desegregation work?" That kind of question, which in some form will be asked by many, cannot be answered in a general or final sense from the data presented here, for several reasons.

First, the term desegregation is a broad one, with multiple meanings, applied to a variety of programs implemented in a variety of settings and involving children with differing backgrounds, educational problems, and racial- and ethnic-group memberships. The data from the present study reflect on compulsory transfer -- in most cases involving busing -- of a predominantly Negro elementary population to predominantly white receiving schools whose populations represent both higher socioeconomic levels and higher academic performance levels than those of the incoming transfer pupils. The data here speak to a program implemented in a university community which places a high premium on educational excellence, and which holds high expectations for the educational performance of its young people; a community in which the typical child tends to perform above national norms on standardized tests of academic performance. The data speak, moreover, to what appears to be an uncommon situation among desegregation programs: one in which the reassignment of a multiple-problem population was accompanied by something of a reduction in supportive services to that population -- a consequence of sharply increased special services during the final year of attendance at the de facto segregated school at a level which could not be maintained the following year in the receiving schools. All of these things limit the generality of any answer that might be given.

A second reason no general answer can be given is that the question itself is too broad. Implicit in the question is reference to an objective, but what objective? Some would envision the objective of school desegregation programs to be an increase in the achievement levels of ghetto children. Some undoubtedly would see it as the assimilation of middle-class standards and values by these children, who must live and get along in a predominantly middle-class culture. Some would describe the objective as the creation of an educational climate in which the ghetto child can develop the sense of personal worth and dignity said to be denied him by segregated schooling. Others would see it as the development of understanding and appreciation, on the part of all children, for those who are different from themselves. Meaningful answers, thus, must be addressed to more specific questions than "does it work?".

A third reason that general question cannot be answered here relates in a different way to program goals. The goals of desegregated education, however they may be formulated, are essentially long-range goals. The fundamental assumption underlying school desegregation efforts is that a change in the educational environment will facilitate desirable changes in the behaviors and attitudes of children, and thereby increase the likelihood that those children will lead productive and satisfying adult lives. The real test of current desegregation programs, then, lies in the future; the best that can be done at present is to search out signposts along the way. The alteration of established behavior patterns and attitudes is not a rapid process; and the present study, dealing with a single year of desegregated schooling, can offer only the most tentative kinds of evidence about progress toward long-range goals.

Assuming that one were to formulate a more precise question, along the lines suggested above -- e.g., did Ann Arbor's desegregated pupils show any benefit in x after a year in the predominantly white schools? -- there remains a further dilemma in responding to it, and that has to do with the value of a general answer that does not apply in all cases. The answer to the question posed above would inevitably be "for the most part, yes," "for a majority of pupils, no," or something of the sort. One could develop, on the basis of the findings here, a profile of the "typical" transfer pupil's response, incorporating all of the behavioral dimensions assessed in the present study; that profile, however, might well not characterize the response of any one individual child. The qualified general answer may suffice for the researcher, and provide general guidelines for program planners; it will be less persuasive to the teacher in a position to observe the exceptions, and probably least persuasive to parents whose children responded differently from the majority of transfer pupils.

The difficulty here is perhaps best illustrated by a specific example. Let us reformulate the broad general question to focus specifically on academic performance, and refine it further to read something like this: did the academic performance of the transfer pupils show improvement at the end of one year of desegregated schooling?

One kind of answer that can be given is that while the transfer pupils did in fact earn higher posttransfer scores on the three academic performance measures employed (scholastic aptitude or IQ, reading, and arithmetic), their posttransfer gains were smaller, on the whole, than the gains made by nontransfer and receiving-school pupils. Thus, initial discrepancies, showing academic performance to be poorest in the transfer group, tended to increase by the end of the posttransfer year. A related finding showed that the average pretransfer reading score for transfer pupils equalled or exceeded expectancies based on national norms in all grades except 4 and 5, whereas only grades K and 1 performed at the expected grade-placement level on the posttransfer reading test. A similar finding for arithmetic, measured in grades 3-5, showed pupils in grades 3 and 4 performing above grade level in the pretransfer year, but only the former group performing above grade level at the end of the posttransfer year. From these data, academic performance in the transfer group cannot be said to have benefited from one year of desegregated schooling.

Consider, however, these additional findings. Some 37 percent of the transfer pupils demonstrated normal or greater gains in reading over the posttransfer year, and 50 percent gained in scholastic aptitude by 5 or more IQ points. At grades K and 5, in contrast to the general picture for the academic data, initial discrepancies in IQ were reduced at the end of the posttransfer year. The greatest reduction, among pupils who began the study in kindergarten, showed posttransfer discrepancies of 7 and 11 IQ points between the transfer group and the nontransfer and receiving-school groups, respectively; the corresponding discrepancies in pretransfer IQ were 10 and 20 points. Finally, half of the 101 parents of transfer pupils interviewed at the end of the posttransfer year had comments to make about their children's academic performance during the first year in the receiving schools, and 43 of these parents reported improved academic performance; six saw no change, and only two felt their children had done less well academically during that year.

This, then, is the problem in attempting to communicate in brief, general statements what happened to children during the first year of Ann Arbor's desegregation program. It is certainly a fair statement of the findings for academic performance to say that the transfer pupils entered the receiving schools with an academic handicap, relative to the performance levels demonstrated by nontransfer and receiving-school pupils, and that this handicap continued to be at least as evident at the end of the first posttransfer year. Yet that statement clearly does not tell the whole story; some children appear to have benefited academically, while others apparently did not. The same kind of limitation applies equally to any general statement which might be made concerning the findings of this study.

With that limitation kept carefully in mind, let us consider briefly the findings in other areas. No attempt will be made to reiterate the contents of the individual chapter summaries; rather, the effort here is directed toward highlighting the encouraging and discouraging signs evident in the first-year data.

Self-esteem, as measured in the present study, appears to have been little affected by a year of desegregated schooling. The transfer pupils showed an overall increase in self-esteem at the end of that year, sufficient in grades K and 1 to compensate initial differences between the transfer and receiving-school groups. However, comparable gains in self-esteem also occurred in the nontransfer group, and, at the higher grade levels, in the receiving-school group as well.

Motivation, as measured by two self-report scales, was initially lowest in the transfer group and showed little overall change in the posttransfer year. On one of the scales, however, dealing with interest in school, Negro boys in the transfer group generally increased their scores sufficiently to equal or exceed the scores of their nontransfer and receiving-school counterparts. Negro transfer boys likewise showed a significantly greater posttransfer gain than Negro nontransfer boys on an objective measure of achievement motivation.

Personal aspiration, as reflected in expressed occupational choice, tended to be lower initially in the transfer group but did not differ significantly in the three populations at the end of the posttransfer year. The positive implications of this result are challenged, however, by the demonstrated instability of occupational choices in elementary-age children.

Interpersonal relationships, assessed sociometrically and via self-report measures, tended to show both positive and negative posttransfer effects. On the whole, the transfer pupils appear to have been slightly less well accepted by their receiving-school classmates than they were the previous year by classmates in the *de facto* segregated school. This finding must be interpreted cautiously, however, inasmuch as some loss in peer status was also apparent among the nontransfer pupils, who experienced no change in reference group. The transfer pupils themselves reported more satisfying interpersonal relationships during the posttransfer year, and a more positive response to their new classmates than to those in the *de facto* segregated school.

Reactions to school, as expressed in a variety of self-report measures, indicated that the transfer pupils found the receiving-school climate less supportive than did children native to the receiving schools, but *more* supportive than the general climate of the *de facto* segregated school. Both before and after the transfer, the transfer pupils tended to rate their own behavior in school as less acceptable than nontransfer and receiving-school pupils rated theirs. The transfer pupils in most cases showed no change, or a decrease, in school-related anxiety following the transfer, and scored below the nontransfer and receiving-school groups in this characteristic. General anxiety, on the other hand, was consistently highest in the transfer group, although a decline from the pretransfer level was seen in all groups in the posttransfer year.

Behavior in school, as described by teachers, appeared to be characterized in the transfer group by generally poorer classroom adjustment and a higher incidence of problems, both before and after the transfer. However, posttransfer changes appeared in the ratings of several characteristics, although "change" here is somewhat difficult to interpret, inasmuch as pre- and posttransfer ratings were supplied by different teachers. An early decline was seen in symptoms of serious behavior disorder, sufficient to compensate the higher pretransfer ratings of the transfer group at all grades but K-1. So-called "neurotic" behavior, immaturity, and passivity likewise were seen to diminish over the posttransfer year, so that at the end of that period the transfer group did not differ significantly from the other two populations in these characteristics. Other rated behavior characteristics showed little overall change from the pretransfer ratings, although occasional changes were noted at a particular grade level, or in a particular subgroup within the transfer population.

Reactions to the transfer, on the part of the transfer pupils and their parents, were positive in a majority of cases. Parents' initial expectations for the transfer showed the greatest modification at the end of the posttransfer year, with more parents reporting positive reactions and many fewer reporting negative reactions at that time. Many parents reported improved behavior in their children, with academic performance and interest in school the two areas of improvement most often mentioned. Parents themselves reported increased participation in school functions during their children's first year in the desegregated school.

The capsule summaries presented above necessarily omit much that is important in these data, and no reader with serious concern for the education of ghetto children will want to limit his reading to those brief portions of the report. The general picture which emerges, nonetheless, provides a convenient point of departure for appraising the early impact of the transfer.

The findings suggest that the first year of desegregated schooling had its greatest impact on the attitudes of the transfer pupils toward their school experience. Perceptions of the receiving-school milieu as more supportive, a generally more positive response to receiving-school classmates, the greater satisfaction expressed with interpersonal relationships generally in the new school (despite some apparent loss in peer status, compared with the prior year), the evidence of increased motivation among Negro boys, the general reactions of pupils as they verbalized them -- all of these things suggest that the transfer constituted a positive stimulus for a majority of the desegregated pupils. That these pupils tended to respond with desirable behavior changes is suggested by the reports of their parents, and by an apparent reduction in some kinds of maladaptive behavior as described by their teachers.

All of these signs are encouraging; at the very least, the breaking of an established school pattern appears to have created in children a new set of expectancies, the rudiments of a readiness to respond that is fundamental to behavior change. This is perhaps as much as can be asked in so short a time, but some part of it, inevitably, must be credited to the novelty of the new school situation. The real question, then, would seem to be this: were the schools able to capitalize on the initially positive response of the transfer children to build the needed supports for more lasting change? -- for there seems little likelihood otherwise that the early attitudinal response would be perpetuated, or that any fundamental change would be seen in the child's sense of worth, or in his academic standing.

Given its limited time span, the present study sheds little light on that question. It is worth noting, however, that positive attitudinal changes observed early in the posttransfer year were generally maintained over the year. Behavioral response, on the other hand, may have been somewhat less positive at the end of the posttransfer year than at the beginning; this is a possible interpretation (though not the only one) of the transfer pupils' slightly less favorable appraisals of their own behavior at that time, and of those instances in which teachers' end-of-the-year ratings suggested increased behavior problems in certain of the transfer pupils.

More recent data from a study by Aberdeen (1969) do not reflect on either the later attitudes of the transfer pupils or their subsequent behavior in school, but do contribute some information about the three areas which showed the least encouraging posttransfer results in the present study. Aberdeen supplemented the pre- and posttransfer data of the present study with a subsequent follow-up of acceptance by peers, self-esteem, and reading achievement in the Negro transfer pupils who were still in elementary school, and still in receiving schools, in 1968. These pupils, representing about a fourth of the original transfer group, had begun the study in grades K-3. Aberdeen's examination of the data on these three characteristics, for the pretransfer year and the first and third posttransfer years, showed little in the way of significant differences between scores over the three-year period. In the area of acceptance by peers, however, the small posttransfer decline noted in the present study was followed by a further small decline between the first and third posttransfer years. While differences were significant only for pupils who began the study in grade 2, the overall trend suggests that one kind of support for positive change -- i.e., social acceptance in the classroom -- was no more available to the transfer pupils (and perhaps less so) after three years in the desegregated school than after the first year.

Aberdeen found no significant changes in self-esteem, and ratios of reading age to chronological age were seen to decline slightly over the three-year period, all in the last year falling below the 1.0 value that would represent the performance of a child scoring exactly at the national norm for his age. The small decline in the reading ratios must be viewed with caution, inasmuch as a different reading test, with a different normative population, was used for the third-year follow-up. Even with that limitation, however, third-year ratios ranging from .91 to .98 for the four grades studied suggest that this smaller group of transfer pupils was at best holding its own, if that, relative to national norms. Aberdeen did not use a control group in his study, but it is predictable from the general performance level of Ann Arbor school children that the initial gap in measured reading achievement between the transfer pupils and their receiving-school classmates was still present, and in all probability larger, at the end of the third posttransfer year.

Aberdeen's findings raise several important questions. Do the general trends in his data mask important individual differences in the response of the transfer pupils? This appeared to be the case in the present study, as exemplified in the academic performance data described earlier in this chapter and true as well for most other characteristics examined. Efforts to identify high- and low-success subgroups within the transfer population -- i.e., children showing an overall positive response or an overall negative response -- were not fruitful here; considerable independence was found to characterize change in the several areas examined. Posttransfer change in reading achievement, for example, failed to correlate significantly with change in other academic performance measures, or much of anything else. With the exception of reading achievement, however, substantial negative correlations between pretransfer scores and posttransfer change indicated that the greatest gains in a particular characteristic tended to occur among pupils with low initial scores for that characteristic. Thus, the greatest gains in IQ tended to occur among pupils with low pretransfer IQs; the children most well accepted by their receiving-school classmates tended to be those least well accepted by their peers in the _de facto_ segregated school; the children showing the most positive changes in attitudes toward school at the end of the posttransfer year tended to be those who had expressed somewhat negative attitudes toward their prior school experience.

These data would suggest that children finding strong rewards and satisfactions in a segregated school situation are the least likely to benefit from desegregation, and that those responding poorly in a segregated school may be the most promising candidates for desegregated schooling, at least in terms of early response to desegregation.

Aberdeen's study raises further questions about the encouraging signs found in the present study following a year of desegregated schooling. Were these no more than a transitory response to a novel situation? Is it possible that desegregation may have the greatest impact in the attitudinal and overt-behavioral domains, without appreciably affecting such deep-seated characteristics as self-esteem, or altering established patterns of academic performance? Is it too soon to expect demonstrable differences in those characteristics? Did we as educators, as a community, simply fail to do enough -- in preparing all children, parents, and teachers for this step; in understanding and coming to grips with the unique problems of the ghetto child; in providing support and special help? The first three questions will be answered only through the collection of further data; the last must be answered, in the final analysis, by soul-searching introspection on the part of all concerned.

By no means does the present study exhaust all possible determinants of a child's response to desegregated schooling. Teachers' attitudes and expectations, which may be particularly critical factors in the child's response, were not measured; we knew of no dependable way to measure them. The attitudes and opinions of the receiving-school children and their parents were not solicited; the emotional climate in the community prior to the transfer suggested that such inquiry might tend to strengthen and crystallize divided opinion, to the detriment of the program. School effects were not examined because of the relatively small numbers of pupils assigned to particular receiving schools, but it is possible that the inevitable shades of difference in program, in emphasis, in overall climate among the six receiving schools may have elicited differential response within the transfer group. The distribution of transfer pupils within the receiving schools -- here, generally one or two to a class, and never more than four -- is another factor of possible importance, but one which could not be tested out in the absence of some alternative distribution with which to compare it.

Nor were all possible outcomes assessed here. Notable omissions, again reflecting the absence of adequate measurement tools, were those of interracial attitudes and general tolerance for individual differences, which many would hope might be altered favorably in a milieu providing opportunities for regular interaction between children of differing racial and cultural backgrounds.

Nonetheless, the present study provides enough evidence to support some tentative conclusions. Desegregation is clearly no panacea for the ills of the ghetto child. The evidence presented here suggests that it may have an early positive impact on the attitudes and behavior of elementary school children, and that it may be a more effective strategy for some children than for others. The evidence suggests also that if the consequences of such intervention are to approach the high hopes reflected in the 1954 Supreme Court decision, in promoting the educational betterment of minority-group children, desegregation must be something more -- and probably a great deal more -- than moving children from one educational setting to another.

Appendix A

BACKGROUND INFORMATION ON THE COMMUNITY AND PUBLIC SCHOOLS OF ANN ARBOR, MICHIGAN

The city of Ann Arbor has grown rapidly since World War II, from a community with fewer than 30,000 citizens in 1940 to a population estimated this year at 100,000. A major stimulus for growth has been provided by the continuing expansion of the University of Michigan: university students living within the corporate limits of the city account for about 30 percent of its population; university employees account for close to 15 percent; and an undetermined number owe their residence here to employment by industries attracted to the area at least partially by the proximity of a major university.

The average income and educational level of Ann Arbor's adult citizens tend to be atypically high, as does the scholastic achievement of its public school pupils, relative to national norms. The gap separating the "average" citizen from that segment of the population which can properly be identified as educationally and/or economically disadvantaged -- a segment which includes a disproportionately large share of the city's Negro population -- is thereby increased.

Nonwhite residents have traditionally accounted for a small fraction of Ann Arbor's population; the 1960 census indicated a racial breakdown of 93.5 percent whites, 4.7 percent Negroes, and 1.8 percent other nonwhites. Reflecting national trends, the Negro population has gained steadily over the past several decades, increasing from 3.5 percent in 1930 to 4.1 percent by 1940, and to 4.5 percent by 1950. A firm figure was not reported for 1965, at the time the study was undertaken, but an estimate of 5 percent, representing more than 4,000 Negroes, is generally considered close. The Negro population is heavily concentrated in the north central and northeastern sections of the city.

During the 1964-65 school year, Negro pupils accounted for a little more than 6 percent of the total public school population and about 7 percent of the public elementary school population. More than three fourths of the Negro elementary pupils were served by three of the district's 22 elementary schools: Jones School, situated in the heart of the north central area, with a Negro enrollment which ranged between 75-80 percent; Mack School, bordering this area on the west, with a Negro enrollment of about 48 percent; and Northside School, located in the northeastern section, with a Negro enrollment of about 21 percent. Of the remaining 19 elementary schools, five had no Negro pupils in 1965, and none enrolled a disproportionate number of Negro pupils, relative to the 7 percent figure reported above for the elementary population.

By decision of the Board of Education, the elementary program at Jones School was terminated in June of 1965. This action resulted from a series of events, originating with the Board's formal recognition, in 1963, of the existence of *de facto* segregation at Jones School. In October of that year, the Board appointed a citizens' committee to study racial distribution in the public schools, and to make recommendations accordingly. The committee's report was made public in June of 1964; it indicated, among other things, that the achievement of Negro pupils attending Jones School lagged behind that of Negro pupils attending other elementary schools in the district.

In August of that year, following several public discussion meetings, the Board acted on the committee's major recommendations. Decisions were made to increase supportive services to Jones School during the 1964-65 school year and to terminate its elementary program at the end of that year, transferring its pupils to elementary schools elsewhere in the district. Staff committees were appointed to develop plans for the transfer, an orientation program for staff in the receiving schools, and a compensatory preschool program for disadvantaged four-year-olds residing in the Jones district.

The last two programs were underway on February 1, 1966, under the guidance of a specially-hired coordinator for special projects. Recommendations regarding pupil transfers were presented to the Board at about the same time and were formally adopted in the spring. The Jones district was subdivided into seven geographic areas, and all elementary pupils residing within a given area were assigned to a designated receiving school.[1] Five of the seven schools selected were to receive approximately 30 pupils each from the Jones district and were sufficiently remote from that district to require busing of the newcomers. The remaining two schools served areas contiguous to the Jones district, and here the "transfers" were to be accomplished through annexation of small portions of the existing Jones attendance area. Capacities and current enrollments of these two schools limited the intake from Jones School to relatively small numbers of pupils; subsequent movement of several Negro families from one of the annexed portions resulted in the elimination of one of these schools as a receiving school. Thus, pupils attending Jones School were ultimately reassigned to six receiving schools. The Jones School facility was converted to a community services center, providing a variety of programs for residents of all ages; a part of the building provides office space for school administrative personnel.

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[1] Receiving schools were selected on the basis of existing enrollment and class size, availability of space, and, where possible, proximity to the Jones attendance area. Mack and Northside schools, with disproportionately large Negro enrollments, were eliminated from consideration.

Racial distribution at Mack School underwent study by a Board-appointed citizens' advisory committee in 1965. The committee was charged with developing a plan for alleviating racial imbalance at Mack School, to be put into effect in September of 1966. The committee presented its findings and recommendations in May of 1966. Much public and Board of Education discussion followed. Reaction to the report was mixed, and as of this date, no action has been taken on the recommendations.

Appendix B

A COMPARISON OF THE PSYCHOLINGUISTIC FUNCTIONING OF "EDUCATIONALLY DEPRIVED" AND "EDUCATIONALLY ADVANTAGED" CHILDREN BEFORE AND AFTER SCHOOL INTEGRATION

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This research was carried out using subjects from the same populations described in the preceding sections of this report. The purpose was to explore the psycholinguistic functioning of school-age children in relation to several sociocultural factors. The investigators sought answers to the following questions:

1. What are the differences between scores of "deprived" and "advantaged" children on the Illinois Test of Psycholinguistic Abilities (ITPA)?

2. What changes occur in the ITPA scores of "deprived" and "advantaged" children after they have been put in similar school settings?

The sample consisted of three groups of kindergarten and first-grade children drawn from three school settings: *de facto* segregated (approximately 75% Negro), "integrated" (approximately 50% Negro), and *de facto* segregated (approximately 0% Negro). Approximately 60 children in each group were administered the ITPA measure in the spring of 1965 (pretransfer) and again in spring of 1966 (after one year in receiving schools). The Illinois Test of Psycholinguistic Abilities is an individually-administered test consisting of 9 subscales designed to measure various aspects of the psycholinguistic functioning of children aged 2-8. In addition, tape recorded measures were made of children's speech for analysis of characteristics relative to the midwestern norm. Finally, an auditory memory test was administered, in which the child was asked to recall orally a list of words uttered by the examiner in scrambled order.

Results of the pretesting showed that the kindergarten receiving-school group performed at or above the standardization mean on all but one subscale of the ITPA. The kindergarten transfer group scored below the mean on all subscales and the nontransfer group on all but one, the sequential (digit repetition) test. For first-grade subjects, the pattern was similar, but the differences were smaller, with receiving-school children scoring below the mean on three subscales, and the transfer and nontransfer groups falling below the mean on six and four subscales, respectively.

Posttest scores on the ITPA again found first-grade receiving-school children (i.e., the pretransfer kindergarten pupils) above the standardization mean on all but one subscale, with the transfer group falling below the mean on all subtests and nontransfer group children scoring below the mean on five of the nine subscales. Second-grade children in receiving schools scored above the mean on all but one subtest, and those in the transfer and nontransfer groups scored above the mean on all but three subscales. Analysis of changes over the one-year period showed similar growth patterns for first-grade children in the three groups. For the older children, however, the pattern of change favored the receiving-school group, where gains amounted to 10 more total score points than gains in the transfer and nontransfer groups.

There was no evidence to suggest that reassignment of the children in the transfer group had either a positive or negative effect, over the period of one year, on their language performance as measured by the ITPA. The program apparently did not reduce the performance of children in the receiving-school group.

The study described above was presented in a paper entitled "The changes in psycholinguistic functioning of children after one year in an integrated school," read at the Annual Meeting of the American Educational Research Association, February, 1967.

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Appendix C

CALIFORNIA ACHIEVEMENT TEST SCORES: 1965-1968

Scores of routinely administered California achievement tests were analyzed for the pretransfer year (1965) and the three subsequent years, to provide a general overview of achievement extending beyond the period of this study.

Two important limitations on the California test data were pointed out in the discussion of arithmetic achievement (Chap. 6). Administration of the tests at midyear posed problems for the interpretation of initial scores as pretransfer baselines, and the subsequent year's scores as indicative of performance after a year of desegregated schooling. The arithmetic test, additionally, was judged a poor measure of the elementary mathematics program but continued to be used in the absence of a better measure.

A further limitation on the data stems from the necessary reliance on school records, which reflect the work of many people and inevitably contain clerical errors. Some obvious errors were spotted and the scores discarded, but the test forms themselves had not been retained and the information recorded could not be verified.

For what they are worth, these data are presented here as the only information currently available on pupil achievement beyond the first posttransfer year. Reading data appear in Tables *C-1*, *C-2*, *C-3*, and *C-4*, for children who in the pretransfer year were in grades 2, 3, 4, and 5. Arithmetic data for children beginning the study in grades 3 and 4 appear in Tables *C-5* and *C-6*. These data can be summarized as follows:

1. For the transfer, nontransfer, and receiving-school populations as a whole, group means at all grade levels typically conform to the pattern described in Chapter 6 for pre- and posttransfer academic performance generally. The lowest means occur in the transfer group, the highest among receiving-school pupils. Overall differences between populations are significant in most cases. When the populations are divided by race and sex, this pattern does not appear consistently and few differences between groups are significant.

2. In general, the achievement gap described earlier between the predominantly Negro transfer group and the predominantly white receiving-school group is seen to continue, and to increase, over the second and third posttransfer years. A trend in this direction is apparent between the means of transfer and nontransfer pupils, although progressive differences are much smaller than those between the means of transfer and receiving-school pupils. This same pattern is evident in the performance of white and Negro children. Irrespective of group membership, group means for the two racial groups become increasing disparate over time.

3. There is no evidence, from these data, that desegregated schooling affects differentially the measured achievement of younger and older transfer children. The grade span examined here is relatively narrow, however, and in the case of arithmetic includes too few grades to warrant any judgment on this point.

4. There is no evidence, from these data, that the longer the exposure to desegregated schooling, the greater its impact on measured achievement.

Table C-1. CALIFORNIA TOTAL READING SCORES FOR PUPILS BEGINNING THE STUDY IN GRADE 2

Year	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1965: T	101.0	11.3	2	89.8	4.4	11	82.0	0.0	1	87.8	7.3	17	89.2	7.2	31
(Pre)NT	94.6	8.9	17	87.2	7.2	11	101.2	5.8	17	91.3	7.6	18	94.2	8.8	63
R	96.5	9.6	180	83.8	6.6	5	100.8	8.3	179	96.0	18.4	2	98.4	9.4	366
		F= 0.518			F= 1.727			F= 0.030			F= 1.482			F=18.593**	
1966: T	110.7	12.5	3	99.5	8.1	8	--	--	0	104.7	8.4	15	103.8	9.1	26
NT	109.6	9.8	14	101.6	9.2	10	115.4	5.2	17	103.7	9.5	15	108.4	9.9	56
R	111.5	8.4	152	89.0	0.0	1	115.5	6.2	141	98.0	11.4	5	113.1	8.0	299
		F= 0.321			F= 0.257			F= 0.000			F= 1.003			F=19.951**	
1967: T	--	--	0	106.2	11.3	4	--	--	0	122.5	13.4	13	118.6	14.4	17
NT	120.9	20.8	7	114.8	11.4	6	135.7	7.3	10	115.5	9.9	11	122.4	14.9	34
R	134.2	17.8	81	--	--	0	138.1	14.8	88	--	--	0	136.2	16.4	169
		F= 3.491			F= 1.379			F= 0.261			F= 2.008			F=17.571**	
1968: T	--	--	0	108.0	3.1	5	--	--	0	129.1	13.4	13	123.2	14.9	18
NT	128.0	21.2	7	123.7	12.7	6	142.2	9.5	10	118.5	11.5	10	128.6	16.3	33
R	140.5	16.9	84	--	--	0	147.7	13.8	88	--	--	0	144.2	15.8	172
		F= 3.399			F= 7.160*			F= 1.502			F= 3.981			F=24.760**	

Table C-2. CALIFORNIA TOTAL READING SCORES FOR PUPILS BEGINNING THE STUDY IN GRADE 3

Year	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1965: T	117.0	0.0	1	98.3	3.9	6	104.5	5.0	2	111.9	3.8	7	106.2	7.8	16
(Pre)NT	113.2	11.2	14	99.4	12.0	14	116.0	5.5	16	108.2	8.9	20	109.3	11.1	64
R	109.9	7.9	172	101.8	10.7	4	113.2	7.2	166	108.0	0.0	1	111.4	7.8	343
	F= 2.053			F= 0.130			F= 2.733			F= 1.056			F= 4.260*		
1966: T	--	--	0	107.5	9.5	4	122.0	0.0	1	129.7	13.4	6	120.9	15.3	11
NT	138.8	19.1	13	111.3	15.0	9	142.6	12.1	16	128.0	11.2	15	132.2	17.9	53
R	133.3	15.9	120	110.2	12.2	4	137.0	14.0	124	106.0	4.2	2	134.5	15.5	250
	F= 1.395			F= 0.113			F= 2.273			F= 3.503*			F= 4.139*		
1967: T	--	--	0	111.0	0.0	1	--	--	0	133.7	6.5	3	128.0	12.5	4
NT	144.4	23.1	11	108.7	14.6	6	144.4	13.9	14	132.5	11.5	13	136.0	19.8	44
R	138.3	15.1	80	123.0	24.0	2	144.1	14.5	76	132.0	0.0	1	140.8	15.1	159
	F= 1.371			F= 1.129			F= 0.005			F= 0.026			F= 2.543		
1968: T	--	--	0	112.5	2.1	2	--	--	0	143.3	1.2	3	131.0	16.9	5
NT	150.5	16.2	11	110.3	17.5	7	152.0	11.6	14	139.9	11.4	13	141.7	19.7	45
R	147.9	15.1	79	136.0	35.4	2	151.3	13.1	80	125.0	0.0	1	149.3	14.5	162
	F= 0.298			F= 1.354			F= 0.042			F= 0.252			F= 6.746**		

Table C-3. CALIFORNIA TOTAL READING SCORES
FOR PUPILS BEGINNING THE STUDY IN GRADE 4

Year	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1965: T	123.0	0.0	1	123.0	13.1	10	111.0	0.0	1	113.2	4.1	4	119.8	11.4	16
(Pre) NT	129.7	18.8	19	121.5	15.2	22	133.1	11.8	15	116.9	11.8	15	125.2	15.9	71
R	134.7	16.4	118	115.0	14.1	4	139.4	12.3	135	130.8	9.8	4	136.8	14.7	261
	F= 1.457			F= 0.444			F= 3.505			F= 3.259			F=24.147**		
1966: T	--	--	0	124.0	16.2	9	--	--	0	116.5	6.6	4	121.7	14.1	13
NT	135.6	19.9	19	124.7	17.3	16	139.3	10.4	12	123.6	10.7	8	131.5	17.2	55
R	139.5	16.9	79	116.0	0.0	1	146.9	13.0	99	131.5	3.5	2	143.3	15.3	181
	F= 0.751			F= 0.010			F= 3.811			F= 1.836			F=20.899**		
1967: T	--	--	0	132.4	11.5	5	--	--	0	122.0	2.8	2	129.4	10.7	7
NT	142.3	17.4	13	132.5	18.4	13	147.2	12.3	10	125.2	5.4	5	138.3	16.9	41
R	145.6	16.7	39	--	--	0	152.8	12.2	36	140.0	0.0	1	148.9	15.0	76
	F= 0.368			F= 0.000			F= 1.608			F= 0.586			F= 9.663**		
1968: T	--	--	0	134.6	21.2	10	--	--	0	109.5	2.1	2	130.4	21.6	12
NT	157.6	29.5	16	139.1	27.4	15	164.3	20.3	11	130.8	22.3	5	150.4	28.2	47
R	172.5	25.0	70	--	--	0	180.0	16.7	67	159.0	14.1	2	175.9	21.6	139
	F= 4.300*			F= 0.189			F= 7.844**			F= 3.400			F=36.848**		

Table C-4. CALIFORNIA TOTAL READING SCORES FOR PUPILS BEGINNING THE STUDY IN GRADE 5[a]

Year	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1965: T	137.6	22.2	5	122.4	8.1	8	132.3	8.4	3	136.3	14.1	7	131.2	14.8	23
(Pre)NT	131.9	17.1	15	119.4	13.1	12	147.5	15.6	19	124.0	10.0	13	132.6	18.0	59
R	144.1	15.7	133	143.0	0.0	1	143.5	13.7	122	134.2	15.6	4	143.6	14.8	260
	F= 4.140*			F= 0.322			F= 1.715			F= 2.686			F=17.180**		
1966: T	142.6	12.2	5	129.6	9.8	7	142.5	6.4	2	143.5	12.8	6	138.3	12.3	20
NT	145.2	17.7	14	130.6	17.1	8	159.8	9.0	18	135.9	13.0	15	145.3	17.6	55
R	152.0	12.9	137	131.3	14.0	3	152.6	12.5	134	135.4	13.7	5	151.7	13.1	279
	F= 2.642			F= 0.019			F= 3.562*			F= 0.803			F=12.557**		
1968: T	168.8	22.9	4	146.3	15.1	6	151.5	2.1	2	178.0	20.8	4	160.5	21.4	16
NT	167.1	29.5	11	145.1	24.3	7	191.2	16.2	13	151.9	12.1	8	168.1	27.7	39
R	182.7	20.8	68	171.0	0.0	1	177.3	20.6	65	154.0	28.3	2	179.6	20.9	136
	F= 2.893			F= 0.011			F= 4.619*			F= 3.326			F= 7.940**		

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[a] No 1967 test; not administered in grade 7.

Table C-5. CALIFORNIA TOTAL ARITHMETIC SCORES FOR PUPILS BEGINNING THE STUDY IN GRADE 3

Year	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1965: T	118.0	0.0	1	106.7	4.9	6	110.0	2.8	2	111.6	3.6	7	109.9	4.9	16
(Pre)NT	118.2	5.1	13	108.4	8.2	13	117.0	5.4	16	111.0	5.6	20	113.5	7.1	62
R	113.2	6.7	173	104.5	5.4	4	114.0	5.4	163	112.0	0.0	1	113.5	6.2	341
	F= 6.765*			F= 0.487			F= 2.943			F= 0.050			F= 2.423		
1966: T	--	--	0	117.2	9.4	5	122.0	0.0	1	126.3	2.9	7	122.5	7.3	13
NT	133.3	10.5	13	115.6	10.3	10	132.6	9.1	16	124.7	6.1	15	127.4	11.0	54
R	130.0	11.1	118	116.5	13.2	4	130.0	9.2	125	115.0	2.8	2	129.7	10.3	249
	F= 1.049			F= 0.039			F= 1.155			F= 3.675*			F= 3.752*		
1967: T	--	--	0	124.0	0.0	1	--	--	0	133.7	12.6	3	131.2	11.4	4
NT	139.2	14.3	11	113.7	11.7	6	136.6	7.8	14	129.3	7.8	13	132.0	13.0	44
R	137.3	10.7	80	134.0	17.0	2	137.9	9.2	77	124.0	0.0	1	137.5	10.0	160
	F= 0.265			F= 3.823			F= 0.236			F= 0.616			F= 5.006**		
1968: T	--	--	0	125.0	4.2	2	--	--	0	136.7	21.2	3	132.0	16.4	5
NT	148.5	12.8	11	120.6	10.5	7	147.6	9.3	14	138.2	7.0	13	140.9	13.7	45
R	145.4	12.3	80	139.0	21.2	2	145.9	9.0	79	129.0	0.0	1	145.5	10.9	162
	F= 0.583			F= 1.868			F= 0.418			F= 0.050			F= 5.514**		

Table C-6. CALIFORNIA TOTAL ARITHMETIC SCORES FOR PUPILS BEGINNING THE STUDY IN GRADE 4[a]

Year	White boys			Negro boys			White girls			Negro girls			Total		
	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n	Mean	σ	n
1965: T	125.0	0.0	1	129.0	9.4	10	114.0	0.0	1	125.0	6.1	4	126.8	8.7	16
(Pre)NT	122.7	11.6	19	119.1	7.8	22	126.1	8.3	15	117.1	9.6	15	121.1	9.8	71
R	130.5	9.9	118	116.5	13.6	4	129.8	7.9	134	122.5	11.3	4	129.8	9.2	260
	F= 9.798**			F= 4.985*			F= 2.956			F= 1.384			F=24.805**		
1966: T	--	--	0	132.5	8.5	8	--	--	0	122.5	4.0	4	129.2	8.6	12
NT	133.2	13.6	19	124.0	12.3	16	136.3	11.3	12	123.0	8.2	8	129.7	13.0	55
R	137.3	11.5	79	121.0	0.0	1	137.8	7.8	98	127.0	8.5	2	137.4	9.7	180
	F= 1.820			F= 3.061			F= 0.343			F= 0.282			F=13.436**		
1967: T	--	--	0	135.6	9.8	5	--	--	0	132.5	0.7	2	134.7	8.1	7
NT	141.8	11.4	14	128.1	14.1	14	138.4	10.6	10	129.8	3.0	5	135.2	12.8	43
R	144.9	11.0	39	--	--	0	146.7	10.6	36	139.0	0.0	1	145.7	10.7	76
	F= 0.803			F= 1.174			F= 4.821*			F= 1.399			F=13.072**		

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[a] For 1965-1967 only; test not administered in grade 7.

Appendix D

INITIAL EFFECTS OF DESEGREGATION ON THE ACHIEVEMENT MOTIVATION OF NEGRO ELEMENTARY SCHOOL CHILDREN[1]

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This paper will explore a school desegregation program to see what initial effects it had on Negro children's achievement motivation. In so doing this paper will also provide some descriptive analyses of the achievement motivation of Negro youngsters in school settings with different racial balances. In the initial stage the desegregation program seems to have had positive effects on the achievement orientation of some children; for others, it seems to have had very little effect. Generally speaking, the results are complex, suggesting that methods for evoking a higher achievement orientation in Negro children will have to take a more particularistic account of the child -- his sex, his age, the specific type of school setting. Even more important the results differ depending on how achievement motivation is assessed. Social planners will have to take these differences into account.

The analyses in this paper were made possible through a unique research opportunity that was established by the public school system in a small midwestern city. Prior to the fall of 1965, there had been a problem of *de facto* segregation in that city, very much like that existing for many other small northern cities. The Negro population is primarily concentrated in a small ghetto with four neighborhood schools servicing the area. One of the schools was predominantly Negro; the other had a near equal balance of the races. Aside from the other two schools (each with small populations of Negroes), there were very few Negro children in the other schools of the city. A busing procedure was adopted by the public school system as a solution to the problem of the predominantly Negro school. The busing involved compulsory transfer of the population of the predominantly Negro school to predominantly white schools in other parts of the city. Henceforth, we will refer to these children as the transfer pupils. Elementary education was discontinued in the school building that previously housed the transfer group. The transfer pupils were reassigned to six receiving schools, five of which were too far from the home neighborhood for the children to walk. Busing was required. Such a procedure has been adopted or has been contemplated by many American school systems as a solution to existing racial imbalances.

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[1] To appear in *Journal of Social Issues*, 1969, Vol. 3; reprinted by permission.

The school with equal proportions of Negroes and whites was retained without change. Potentially this school can serve as a control group for an evaluation of the effects of desegregation on the transfer pupils, who experience a planned change while the former do not. Henceforth, we will refer to this school as the nontransfer school and to its pupils as the nontransfer pupils.

The unique research opportunity provided by the particular school system under investigation came in its decision to gather some information about the children before the move, so that potential effects of change could be assessed. This information was obtained not only about transfer pupils but also about the nontransfer pupils and the children from the schools that would receive the transfer pupils (averaging 97 percent white). These latter schools will henceforth be called receiving schools and their pupils will be called receiving-school pupils.

Assessments were made not only of achievement motivation, but also of many other factors, including academic achievement, IQ, and peer relationships. All of this testing took place in the spring of 1965 before the busing procedure was begun. These children were then retested in 1966. The effect of a year's desegregation could thus be assessed. In particular the Negro transfer pupils could be compared to the Negro nontransfer pupils after the former had experienced one year of desegregation. Hopefully further testing of these same children over a longer span of time will take place, and the more permanent effects of the busing procedure or the desegregation, in general, can be assessed. In this paper, however, we will only be assessing such effects on achievement motivation after one year.

In looking at the changes in the achievement motivation scores between 1965 and 1966, we will investigate the complex set of conditions that in addition to normal developmental differences might be affecting these changes in different groups.

For the Negro transfer pupil the year's experience in a receiving school meant going from a predominantly Negro school population to a predominantly white population -- from being part of a racial majority to being part of a racial minority. After the transfer there were 4 percent to 15 percent Negroes in the receiving-school classrooms and approximately 7 percent in the receiving schools. But also an obvious change in the socio-economic status of the composition of this school had occurred. And the population in the primarily middle-class receiving schools was more prepared for the school curriculum than the population of the predominantly lower-class Negro school.

For the white and Negro nontransfer pupils, the year from 1965 to 1966 was spent in a school that services approximately the same number of Negroes as whites. In this nontransfer school district, not all component neighborhoods are integrated. The ghetto area, although it includes some white families, borders on a predominantly white residential area. Major friendship groups exist primarily within fairly restricted neighborhood districts, although there is intermingling on the playground during school. One might say then that either motivational changes or motivational stability for these groups in the year from 1965 to 1966 can potentially reflect the effect of experiencing a school setting in which the racial balance is not predominantly one race or the other. Compared to the predominantly Negro school before desegregation, it is undoubtedly a higher status school for the Negro in the community, both in prestige and socio-economic status of the families it serves. Compared to most of the predominantly white schools in that community, the nontransfer school is undoubtedly a lower status school for the white child.

While the research reported in this paper has as its primary focus the racial problem this country is facing today, we would like to point out that the results of this study may have some generalization beyond the immediate practical social problem. A general psychological issue at stake here might be stated as follows: what are the effects of a change in reference group norms on personal motivation? The Negro children from the predominantly Negro school were transferred to schools where the level of achievement is much higher. For the Negro child in such a situation, the possibilities for comparisons of his performance to the higher norms could be quite traumatic. But such comparison could ultimately have positive effects on the motivation of the youngster, especially if modelling phenomena can occur. Katz (1967) has recently suggested that the introduction of a social comparison group of high ability in desegregation would have a positive effect on a child who experiences cross-racial acceptance in the classroom but may, in fact, be detrimental to the motivation of a child who experiences cross-racial rejection in the classroom. Thus Katz should predict that desegregation in the present study would effect the variance of achievement motivation of Negro children.

We entered this study, however, with no *a priori* predictions about what would happen to the achievement motivation of the children as they were moved from a predominantly Negro to a predominantly white school setting. We undertook the study with only the empirical question in mind. The results, however, may suggest some theoretical hypotheses for further generalizations.

Measuring Achievement Motivation

An attempt to measure achievement motivation among youngsters by utilizing techniques suitable for paper-and-pencil administration is beset with many difficulties. These difficulties are increased when the comparisons to be made involve racial differences. Typically, researchers have used questionnaires, such as the one Coleman (1966) employed in his important report on achievement in youngsters. Over-compliance to authority is a psychological characteristic of Negroes that the researcher has to reckon with when he uses questionnaire techniques. For example, among Coleman's questions are such direct inquiries as how much the respondent studies. The fact that Coleman found that Negro children reported they studied more than white children could be interpreted as the Negro child wanting to give the authority the "right" and proper answers.

Other researchers have turned to the examination of projective fantasies as a means of measuring achievement motivation in order to take advantage of the accumulation of information about this type of measure. Nuttall (1963) and others who have used a projective measure of motivation with Negroes have had to confront the problem of interpreting exactly what a Negro person is telling about himself and his perceptions of the world when he gives an apperceptive fantasy about achievement. Is it projected fantasy, compensatory fantasy, or merely his appraisal of what the world is like?

It was because of such difficulties with both questionnaires and projective measures, especially in their use with young children, that the senior investigator undertook the development of the behavioristic measures of achievement motivation. These are the measures that will be reported in this paper. There will be a measure of autonomous achievement motivation and a measure of social comparison achievement motivation. A recent report (Veroff, 1967) summarizes in some detail the validity of these measures. We will discuss each briefly below.

Autonomous Achievement Motivation

A measure of autonomous achievement motivation taps a child's risktaking preferences and is based on Atkinson's formulation of achievement risk behavior (1964). Individually tested, the child is asked to state his preferences of different levels of difficulty on a graded task. He is asked to perform a task until he fails two in a row of that series. The child is then asked to select one of four tasks: the easiest one; the last one he was able to do correctly; the first one he failed; and the last one he failed (the most difficult). The choice of either the last one he was able to do correctly or the first one he failed is assumed to be a choice of moderate difficulty. According to Atkinson's thinking about this kind of behavior, a choice of moderate difficulty may represent positive resultant achievement tendency. The choice of either the easiest task or the most difficult one is assumed to be a choice reflecting a negative, avoidant tendency. That is, the child in selecting an easy or a very difficult task is avoiding challenge or avoiding achievement risk; his avoidant tendency is assumed to be stronger than his positive achievement interests. The children make four such choices in this measure of achievement motivation. The number of challenging tasks selected is taken as the measure of a child's positive achievement motivation and has a possible range of zero to four. In this measure we do not differentiate between low scores stemming from overaspiration or underaspiration. All that we measure is does the child take moderate risks? It is assumed to be a measure of autonomous achievement motivation because the standards of excellence for the child are based on his own capacity to achieve. The child is not given any information about how well other children perform the tasks or about how much the experimenter expects the child to do. The child only knows at what level of difficulty he himself can perform a given task.

It is important to note that the four tasks that are used as part of this measure of autonomous achievement motivation cover somewhat different domains of skill. The child is asked to perform a motor-visual memory task -- reproducing strings of beads arranged in various patterns; a motor task -- throwing a ball into a basket from various distances; a memory task -- recalling pictures that he has been shown; and an aesthetic task -- copying figures of various complexities. Since the measure of achievement motivation is the sum across these types of tasks, we have assumed that the measure reflects a general achievement disposition. It encompasses a variety of skills. No doubt, achievement interest in a particular type of skill, such as interest in athletic achievement, might be different from the overall measure we are using here. Although the more specific achievement interests may be very important in determining behavior, we are purposely using a general measure of achievement motivation because we are looking for achievement motivation changes in the school setting, and there the child encounters a variety of achievement demands.

This measure has had considerable construct validation. It has been related to experimental arousal of achievement concerns, over and under-achievement in second grade youngsters, test anxiety under certain conditions, maternal attitudes about independence and achievement, and the way in which the child generalizes his experiences of success and failure. These results are summarized elsewhere (Veroff, 1967).

The correlation between the first and second testings in 1965 and 1966 is .29 (Pearson r). While this may be taken as a test-retest reliability of the measure, and in that case .29 is quite low, it is the very possibility of affecting this measure through desegregation that inspired the present study. An important change period in the child's experience in his elementary school career, a period which quite conceivably influenced autonomous achievement motivation, intervened between the two dates.

Social Comparison Achievement Motivation

We assume that the second measure of achievement motivation reflects a child's interest in achieving favorable comparison with others or avoiding unfavorable comparison. In this measure the child is asked to select one of three tasks to do. He is to select only one. The three tasks all look alike visually, but the child is told that one of them is easy for boys (or girls) his age to do, the second one that some boys (or girls) his age can do and some cannot and the third that most boys (or girls) his age cannot do. The child then selects one of these to try. It is assumed that a child's general interest in comparison to others of his own age and sex is assessed by the level of difficulty he prefers to try, given only one as a possible choice. In the 1965 administration the three tasks were contained in 3" x 2" x 2" cardboard boxes. The test administrator shook the boxes to indicate that there was something in them for the child to do. In the 1966 administration the three tasks were contained in 5" x 7" yellow envelopes. In the 1965 administration after making his choice, the child was asked to perform a probability matching task. The task was sufficiently vague so that it was very difficult to assess whether the child had truly succeeded or failed it. In the 1966 administration, the child had as his task telling stories in response to pictures. Again success or failure at it was ambiguous.

Two types of scores can be derived from this measure. One score represents the level of difficulty of social comparison that the child selects: easy, challenging, or hard. For the measure of social comparison achievement motivation, however, we use not the absolute level of difficulty but whether or not the child selects the moderate level of difficulty. Again, following Atkinson's views, we would predict that high achievement orientation is reflected in the selection of a moderately difficult social comparison rather than the most difficult or the easiest. Both measures, however, will be examined in the study -- the absolute level of social comparison desired and whether or not the child selects moderate social comparison.

Data Collection

In the spring of 1965, prior to the transfer, these measures of achievement motivation were collected during individual sessions with nearly 1,000 pupils in kindergarten through 5th grade in the three groups: the transfer (n = 165); the nontransfer (n = 409); and the receiving (n = 419, representing a 20 percent sample). Nine interviewers were randomly assigned to different schools. The interviewers were all females between the ages of 20 and 45 years of age, recruited from a university and interested citizens in the community. Interviewers were carefully briefed on the procedures in order to avoid an interviewer effect; they were particularly briefed on how to answer the questions the children might ask about the nature and goals of the testing and their specific responses on the tests. There were no systematic interviewer effects that emerged in the data analysis.

In 1966, the transfer and nontransfer pupils were retested, but this time all of the pupils in the receiving schools were tested. This resulted in a total population of nearly 3,000 pupils in the 1966 testing. The only difference between the two testing procedures was that in the second testing, envelopes were used instead of the white boxes for containing the tests of social comparison motivation. Different interviewers were used for each year.

In that it involved testing and retesting of elementary school children after a year, this procedure made available data pertaining to changes in achievement motivation from kindergarten to first grade, from first grade to second grade, and so on.

Data Analysis

Three scores were computed for each child in the first and in the second testing: an autonomous achievement motivation score (ranging from 0 to 4); a level of social comparison (ranging from 1 through 3 with 1 representing the easy end of the scale); and a social achievement motivation score (derived by changing scores of 1 and 3 on the social comparison scale to 0, indicating non-risk and by changing 2 on that scale to 1 indicating moderate risk). Analyses of variance were computed on three sets of scores; the 1965 scores; the 1966 scores; and the change scores from 1965 to 1966 for subjects who participated in both testings. Change scores for each measure were computed by subtracting the scores on the first testing from the scores on the second. For autonomous achievement motivation change the range was -4 to +4; for level of social comparison it was -2 to +2; for social achievement motivation it was -1 to +1. Since any one of the analyses of variance of change scores might be affected by the initial position of the child on a test, a covariance analysis was done on each set of the change scores using the appropriate 1965 score as a covariate.

Because IQ as measured by the Lorge-Thorndike Intelligence Tests (1957 edition), was somewhat but minimally related to some of the measures of motivation, covariance analyses were also done with IQ. In the covariance analyses we found that IQ had little or no effect on any of the analyses of variance. We will not report these covariance analyses here, but it is important to keep in mind that IQ cannot account for the differences we will be reporting.

The results will be divided into three parts: analysis of 1965 scores before desegregation; analysis of 1966 scores after one year of desegregation; analysis of change scores from 1965 to 1966. In all of these analyses, age was a highly significant variable in its own right; sex differences were also readily apparent; and in some instances, an interaction of sex and age appeared. We will only discuss these sets of results when they are directly pertinent to the problem of desegregation.

In the analyses of variance or covariance four variables and their interactions were explored: age, race, sex, and school. Three age classifications were used -- early, middle, and late elementary school years. Early elementary school years meant the kindergarten and first graders of 1965 who became the first and second graders of 1966; middle elementary school years meant the second and third graders of 1965 who became the third and fourth graders of 1966; and late school years meant the fourth and fifth graders of 1965 who became the fifth and sixth graders of 1966. We only considered white and Negro pupils.

In defining the school variable we wished to explore a social psychologically defined difference that might have potential generalizability beyond the immediate school situation. At the same time we wanted to look at specific school effects. Therefore in the 1965 analysis of variance we defined the school variable as the relative school status for the child depending on his race, both in terms of prestige in the community and socio-economic status of the families it services. Thus, we lumped together the Negro transfer pupils with the white nontransfer pupils and called this a group with a low status school environment. Considering that in 1965 the Negro transfer pupils were in predominantly Negro schools and the white nontransfer pupils were in the 50% Negro, 50% white school, we noted that, in both cases, these children are deprived of extensive contact with children whose backgrounds represent a higher rung on the ladder of social mobility. In the same manner we combined the Negro nontransfer pupils, who were in the racially balanced school, with the white receiving-school pupils, who were in the virtually all-white school, and called this a high status school environment. In both cases, these children have contact with schoolmates whose backgrounds represent either slightly higher levels of social mobility or the same moderate or high level. We will ignore the small number (31) of white transfer pupils in this analysis.

For both 1966 scores and change scores we combined the Negro transfer pupils with the white nontransfer pupils and the Negro nontransfer pupils with the white receiving-school pupils again. In this analysis we were exploring a different school variable, the relative "*minority*" status of the child. A Negro in a receiving school is in a clear minority; a white child in a school with a high proportion of Negro pupils might be considered to be in a *psychological* minority position, relative to his out-of-school environment, while in the same situation a Negro might be considered to be in a psychological majority position. These school variables are very grossly defined; they were set up this way for exploratory purposes only. It is not the school variables *per se* in which we are mostly interested, although they did yield some interesting results. Rather, our interest is in the difference between the effects of different types of school conditions on Negro children. Therefore, in our analyses of variance, we are looking particularly for race-school interactions. We will especially be interested in differences between "minority" and "majority" status of Negroes -- the *transfer* and the *non-transfer pupils*.

1965 Achievement Motivation Scores (Before Desegregation)

Following Katz's hypothesis we looked for variability differences in scores across groups. No variability differences were found in scores. However, in Table 1 we can see some very large racial differences in *mean* autonomous and social achievement motivation. In the case of autonomous achievement motivation scores, there was a consistent tendency for the Negroes in the lower status group to be especially low, although the interaction of school status and race was significant not at the .05 level of confidence but only at the .10 level. Scheffé testing, a method for establishing confidence intervals for *post hoc* comparisons of means examined following significant F-ratios (Hays, 1963) yielded significant race differences ($.05 > \underline{p} < .10$) for low status schools but not for high status schools. In the case of the social achievement motivation score there was a significant interaction between race and sex, a result that points to the trend for the racial differences to be more apparent on the boys' scores than in the girls' scores. Scheffé tests contrasting race differences with boys and girls separately however, yielded no significant difference. When we look at the level of desired social comparison we no longer find any racial differences, but there is a school status difference which reflects the fact that children in the school with lower status are generally higher in stated level of desired social comparison than are children in the school with higher status. This suggests the possibility that either the higher status group sets particularly low

Table 1. Mean Achievement Motivation Scores in 1965

(By Race X Grade X Sex X School Status)

					Type of Achievement Motivation					
Grade Level	Sex	School Status	(N)		Autonomous Achievement Motivation		Social Achievement Motivation		Level of Desired Social Comparison	
			White	Negro	White	Negro	White	Negro	White	Negro
Early Grades (K-1)	Boys	Low[1]	(28)	(16)	2.89	2.38	.36	.12	1.64	1.88
		High	(67)	(17)	2.58	2.65	.13	.06	1.34	1.12
	Girls	Low	(27)	(22)	2.33	2.04	.11	.14	1.29	1.23
		High	(70)	(26)	2.50	2.27	.09	.04	1.14	1.27
Middle Grades (2-3)	Boys	Low	(24)	(15)	2.71	2.07	.21	.27	1.96	1.94
		High	(71)	(21)	2.84	2.52	.41	.19	1.97	1.95
	Girls	Low	(29)	(23)	2.86	2.26	.21	.17	2.03	2.21
		High	(72)	(27)	3.06	2.59	.26	.26	1.54	1.54
Later Grades (4-5)	Boys	Low	(29)	(17)	2.62	2.12	.55	.29	2.19	2.23
		High	(69)	(25)	2.43	2.16	.46	.40	2.34	2.04
	Girls	Low	(29)	(10)	3.31	1.90	.59	.10	1.93	2.70
		High	(70)	(17)	3.03	2.65	.53	.47	1.86	1.94

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[1] "Low" school status is defined as 80 percent Negro balance for Negro children, and 47 percent Negro balance for white children; "high" school status is defined as 47 percent Negro balance for Negro children and 3 percent balance for white children.

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Table 2. Analyses of Variance of 1965 Achievement Motivation Scores

		F-Tests for Analyses of Variance in:					
Type of Variance Tested		Autonomous Achievement Motivation		Social Achievement Motivation		Level of Desired Social Comparison	
	df	F	P	F	P	F	P
A (grade level)	(2, 807)	4.20	.02	37.64	.001	77.88	.001
B (sex)	(1, 807)	3.60		2.57		30.08	.001
C (race)	(1, 807)	22.61	.001	9.94	.005	.04	
D (school status)	(1, 807)	2.02		.14		13.67	.001
AXB	(2, 807)	6.90	.001	1.37		.05	
AXC	(2, 807)	.89		.83		.07	
AXD	(2, 807)	.71		.77		3.08	.05
BXC	(1, 807)	1.68		5.98	.05	1.96	
BXD	(1, 807)	.80		.33		3.21	
CXD	(1, 807)	2.74	(.10)	.62		3.17	
AXBXC	(2, 807)	.37		.77		1.41	
AXBXD	(2, 807)	.25		.58		6.68	.005
AXCXD	(2, 807)	.38		2.50		1.02	
BXCXD	(1, 807)	00		.09		.21	
AXBXCXD	(2, 807)	.95		1.32		1.57	

social achievement aspirations or the lower status groups set particularly high ones. But not for all children. A closer examination of the significant interactions involving school status, and applying some Scheffé testing of mean differences reveal that only boys in the early grades and girls in the upper grades are particularly more aspiring in setting social comparison levels if they are in schools of low social status -- schools that deprive them of contact with others who may represent models for improving their position. Only for these groups were the school differences significant.

1966 Achievement Motivation Scores (After Desegregation)

Again no significant variability differences in scores were obtained. However, the same racial differences found in the 1965 mean scores applied to the 1966 mean scores: Negroes were generally lower in both autonomous and social comparison achievement motivation (cf. Tables 3 and 4).

A new result appears for the autonomous achievement motivation scores, and it is very important. The sex x race x school interaction is significant, with Negro boys in the transfer school (the "minority" school) having consistently higher autonomous achievement motivation scores than the Negro boys in the nontransfer group (the "majority" school). The opposite trend consistently applies to the girls' scores. None of these results is separately significant by Scheffé testing, but the overall consistency is impressive!

In addition to the race difference there were significant school differences found in the analysis of social comparison achievement motivation scores. Children in minority status tended to have lower scores. This trend is not consistent in all groups. One of the important inconsistencies is an opposite trend for Negro boys in the later grades.

Before we highlight this inconsistency, let us look at the analysis of the absolute level of desired social comparison. There, too, a school effect was significant with children in minority status, like the children in schools of lower status in 1965, stating *higher* levels of desired social comparison. But, in the analysis of these scores, we also find minority status producing a significant effect in interaction with age, sex, and race. Although there are no Scheffé comparisons that are strikingly significant, this interaction effect seems best interpreted as follows: while minority status tends to be associated with higher means for most groups, it tends to be associated with *lower means* for Negro

Table 3. Mean Achievement Motivation Scores in 1966

(By Race X Grade X Sex X Minority Status in School)

Grade Level	Sex	Minority Status in School[1]	(N)		Type of Achievement Motivation: Autonomous Achievement Motivation		Social Achievement Motivation		Level of Desired Social Comparison	
			White	Negro	White	Negro	White	Negro	White	Negro
Early Grades (1-2)	Boys	Minority	(36)	(16)	3.06	2.75	.36	.19	1.86	1.94
		Majority	(269)	(20)	2.83	2.45	.30	.15	1.72	1.25
	Girls	Minority	(35)	(23)	2.97	2.56	.14	.22	1.60	1.48
		Majority	(261)	(27)	2.84	2.89	.27	.19	1.52	1.33
Middle Grades (3-4)	Boys	Minority	(29)	(13)	2.79	2.62	.45	.23	2.27	2.00
		Majority	(275)	(21)	2.75	2.19	.53	.29	2.15	2.43
	Girls	Minority	(33)	(22)	3.09	2.59	.52	.18	2.24	2.18
		Majority	(266)	(32)	2.93	2.84	.55	.31	1.95	2.00
Later Grades (5-6)	Boys	Minority	(32)	(16)	2.28	2.62	.50	.50	2.37	2.25
		Majority	(213)	(27)	2.55	2.18	.48	.26	2.30	2.59
	Girls	Minority	(30)	(10)	2.87	1.90	.57	.30	2.23	2.70
		Majority	(231)	(21)	2.73	2.86	.59	.61	2.18	1.90

[1] Minority status for a Negro means attending a predominately white receiver school, and for a white child means attending a 47 percent Negro school; majority status for a Negro child means attending a 47 percent Negro school, and for a white child means attending a predominately white receiver school.

Table 4. Analyses of Variance of 1966 Achievement Motivation Scores

		F-Tests for Analyses of Variance in:					
Type of Variance Tested		Autonomous Achievement Motivation		Social Achievement Motivation		Level of Desired Social Comparison	
	df	F	P	F	P	F	P
A (grade level)	(2, 1934)	7.40	.001	55.59	.001	148.02	.001
B (sex)	(1, 1934)	8.10	.005	1.45		31.00	.001
C (race)	(1, 1934)	8.08	.005	19.95	.001	.56	
D (minority status in school)	(1, 1934)	.04		5.74	.025	5.75	.025
AXB	(2, 1934)	1.56		3.82	.025	.24	
AXC	(2, 1934)	.29		2.37		3.29	.05
AXD	(2, 1934)	.66		1.07		.15	
BXC	(1, 1934)	.68		.62		.67	
BXD	(1, 1934)	.26		2.09		.90	
CXD	(1, 1934)	.56		.03		00	
AXBXC	(2, 1934)	.39		.58		.77	
AXBXD	(2, 1934)	.11		.47		2.31	
AXCXD	(2, 1934)	.10		.20		2.41	
BXCXD	(1, 1934)	7.93	.005	.60		2.00	
AXBXCXD	(2, 1934)	1.17		1.79		4.81	.01

boys in the middle and later school years. This inconsistency parallels the inconsistency mentioned earlier: while minority school status is associated with lower social comparison achievement motivation scores generally, it is associated with higher social comparison achievement motivation scores in older Negro boys.

This pattern of results suggests the following interpretative summary of the 1966 social comparison achievement motivation scores and absolute desired level scores: minority school status, in contrast to majority school status, is generally associated with lower social comparison achievement motivation scores because it is also associated with tendencies to overaspire. In the desegregation setting there are some peculiar conditions that counter this trend for older Negro boys. For them, becoming one of two or three Negroes in an otherwise white schoolroom evidently produces lower aspirations in social comparison and higher social comparison achievement motivation than Negroes in a racially balanced school classroom.

Changes from 1965 to 1966 Achievement Motivation Scores

A perspective on any of these results, especially as they apply to desegregation, can best be obtained by analyzing the scores directly; gauging the change in scores from 1965 to 1966, but controlling for the correlation these scores have with initial scores. These adjusted scores appear in Table 5.

First, let us look at changes in autonomous achievement motivation. We have already anticipated what we view as being the major finding in this study. Table 6 indicated that there is a significant sex x race x school interaction in the analyses of change in autonomous achievement motivation. What is reflecting this interaction is that Negro boys transferred to the minority school setting regardless of their age have higher change scores than the Negro boys remaining in the nontransfer majority setting. This result is significant at the .05 level by Scheffé testing. This school difference (minority vs. majority) does not apply to the white children, more important this school difference does not apply to Negro girls. Thus, the consistent trend noted in their 1966 scores -- lower scores for the transfer Negro girls than for the nontransfers is not upheld in this analysis of change, controlling for initial score. We highlight these comparisons in Table 7, which compares the adjusted mean autonomous motivation change scores for these groups across grade level,

Table 5. Mean Change in Achievement Motivation Scores From 1965 to 1966

Adjusted for Correlation With Initial Scores

(By Race X Grade X Sex X Minority Status in School in 1966)

Grade Level	Sex	Minority[1] Status in School (1966)	(N)		Type of Achievement Motivation Change: Autonomous Achievement Motivation Change[2]		Social Achievement Motivation Change[2]		Desired Level of Social Comparison[2]	
			White	Negro	White	Negro	White	Negro	White	Negro
Early Grades (1-2)	Boys	Minority	(25)	(16)	.17	.64	.09	-.04	.09	-.47
		Majority	(64)	(16)	.30	-.06	.07	-.04	.36	.53
	Girls	Minority	(27)	(22)	.72	.76	-.12	-.08	.64	.59
		Majority	(69)	(25)	.50	.71	-.02	-.08	.70	.30
Middle Grades (3-4)	Boys	Minority	(24)	(15)	.17	.90	.28	-.08	.16	.15
		Majority	(69)	(21)	.02	-.37	.23	.05	-.09	.37
	Girls	Minority	(29)	(23)	.03	.59	.28	-.04	.05	-.41
		Majority	(69)	(27)	-.26	.64	.29	-.02	.63	.42
Later Grades (5-6)	Boys	Minority	(28)	(16)	-.32	.92	.13	.25	-.06	-.32
		Majority	(68)	(24)	.13	.35	.16	-.07	.25	.21
	Girls	Minority	(29)	(8)	-.76	.65	.19	.07	.11	-.70
		Majority	(65)	(16)	-.59	.32	.24	.30	.14	-.34

[1] Minority status for a Negro child means attending a predominantly white school in 1966 and for a white child means attending a school with 47 percent Negro pupils; majority status for a Negro child means attending a school with 47 percent Negro pupils, and for a white child means attending predominantly white schools.

[2] Adjusted for correlation between change scores and initial scores.

Table 6. Analyses of Covariance of Achievement Motivation Change Scores From 1965-1966 With Initial Score as Covariate

Type of Variance Tested		F-Tests for Analyses of Variance of:					
		Change in Autonomous Achievement Motivation[1]		Change in Social Achievement Motivation[1]		Change in Level of Desired Social Comparison[1]	
	df	F	P	F	P	F	P
A (grade level)	(2, 758)	8.15	.001	13.12	.001	43.05	.001
B (sex)	(1, 758)	2.91		00		11.80	.001
C (race)	(1, 758)	1.15		18.41	.001	1.56	
D (minority status in school)	(1, 758)	00		1.70		.79	
AXB	(2, 758)	.64		2.72		.76	
AXC	(2, 758)	1.47		3.31	.05	.87	
AXD	(2, 758)	.76		.22		.48	
BXC	(1, 758)	.07		.11		.24	
BXD	(1, 758)	1.34		1.94		2.15	
CXD	(1, 758)	.07		.16		.48	
AXBXC	(2, 758)	.97		.48		.64	
AXBXD	(2, 758)	.34		.34		.62	
AXCXD	(2, 758)	.16		.49		1.26	
BXCXD	(1, 758)	7.22	.01	.15		2.71	(.10)
AXBXCXD	(2, 758)	1.05		2.27		1.75	

[1] Adjusted for correlation between change scores and initial scores.

according to the racial balance of the school setting in 1966 (a 50 percent white school as opposed to a set of predominantly white schools, averaging 93 percent white).

Table 7. Mean Change in Autonomous Achievement

Motivation Scores From 1965-1966

Adjusted for Correlation With Initial Scores

(By Race X Sex X Racial Balance of School in 1966)

		Race			
		Negro		White	
Sex	Racial Balance of School (1966)	n	Mean Change	n	Mean Change
Boys	50% white	51	-.01*	77	-.01
	Predominantly white	47	.82*	201	.15
Girls	50% white	68	.60	85	-.02
	Predominantly white	53	.48	203	-.10

*Difference between starred means significant at .05 level.

Since the measure of autonomous achievement motivation does not differentiate between underaspiration and overaspiration as indications of low motivation, a change in score could be mainly due to a shift upwards from underaspiring or a shift downwards from overaspiring, or from both. We examined the data to see whether there was any systematic shift from under or over-aspiring, and found none. Therefore, the change in autonomous achievement motivation scores for transfer Negro boys seems to reflect a general moderation of aspirations in the group.

Next, let us consider changes in social comparison achievement motivation. From Table 6 we can note a significant race difference. Looking at Table 5, we see that generally, Negro children did not develop social comparison achievement motivation as rapidly as the white children did -- especially during the middle school years, during which time Veroff (1967) has suggested that social comparison processes are so vital for learning about achievement.

No race differences generally emerge in the changes in absolute social comparison desired. In Table 6 we note a result significant not at the .05 level of confidence but at the shaky .10 level -- the sex x race x school interaction. It is a result, however, that ties into previous results on 1966 scores.

Combining across age levels distinguished in Table 5, we can see the major result accounting for the interaction. Looking at Table 8, where we compare changes in desired social comparison among Negro and white boys and girls who are in a 50-50 racially balanced school in 1966 with those who were in a predominantly white school, we again find differences mainly for Negro boys. Significant at the .10 level was a trend for the nontransfer Negro boys (in the 50 percent white school) to show a larger upward change in aspiration than the transfer Negro boys (in predominantly white schools). There were no comparable differences in the comparison of Negro girls or white boys or girls. Again one is led to the conclusion that something about the desegregated setting put some restraints on the unrealistically high aspirations of the Negro boys while something about the segregated setting promotes overaspiration in Negro boys.

Discussion

Our results suggest that the effects of one year's experience with desegregation on achievement motivation are more apparent in Negro boys than in Negro girls. These results are clearest when we use a measure of autonomous achievement motivation on which transfer Negro boys increase more after the transfer than the nontransfer Negro boys. There are some trends indicating parallel findings with measures of social comparison motivation, with desegregation tending to combat a proclivity in older Negro boys to overaspire and, thus, promoting a moderate risk-taking in social comparison.

What is it about going to a predominantly white school that has such effects on Negro boys during the first year? And why does it not happen to the Negro girls? Further

Table 8. Mean Change in Desired Social Comparison Level From 1965-1966, Adjusted for Correlation With Initial Scores (By Race X Sex X Racial Balance of School in 1966)

		Race			
		Negro		White	
Sex	Racial Balance of School (1966)	n	Mean Change	n	Mean Change
Boys	50% white	61	.35*	77	.06
	Predominantly white	47	-.20*	201	.17
Girls	50% white	68	.20	85	.26
	Predominantly white	53	-.06	203	.48

*Difference between starred means significant at .10 level.

analyses of data currently unavailable to the researchers might help answer these questions. In particular, we should take a close look at how Negro boys and girls differ from one another as they adapt to the receiving schools. Do they differ in patterns of group acceptance? Do they differ in actual ability differences demonstrated during the year?

For now, we suggest a speculative hypothesis. First let us assume a Negro boy is very competent in athletics, perhaps more than most white boys of the same age. Athletic competence is a strong achievement value for American boys. In a desegregated receiving school, a Negro boy can suddenly feel strong group support for this obvious athletic competence. The Negro boy, thus, has a readily available basis for social interaction and social acceptance, a readily available support to his feelings of competence. This change can positively affect not only the Negro boy's autonomous achievement motivation. It can underpin his confidence enabling him to aspire higher if he was underaspiring and to moderate his aspirations if he was defensively overaspiring. Newfound feelings of competence in a group can build a valued reference group for him that might temper his general tendency to overaspire in social comparison.

The literature on achievement motivation (Atkinson, 1964) suggests that overaspiration may be defensive avoidance of ego involvement in a task. Thus, social supports that remove defensiveness could result in building more moderate goals in social comparison. We have some slight evidence for the latter in older Negro boys.

For a Negro girl in the desegregated receiving school, this same physical competence will be much less likely to gain social acceptance among peers. Being "good-looking" is a more salient dimension for such acceptance than possession of abilities which are more appropriate for males. Tuddenham (1951) shows that it is only among boys that athletic skill and dominance consistently define the basis of social acceptance.

Aside from the specific effects of desegregation on achievement motivation, we should also highlight the following results that may have implications for desegregation programs in general:

1. Negro children compared to white children have lower social comparison achievement motivation in most of the school settings that we have examined, not necessarily because they have low stated goals but because often they have unrealistically high stated goals. When we looked at overall race differences in the desired level of social comparison in the envelope choice we found 36 percent of the Negroes and 29 percent of the whites choosing the easiest, but we found that 33 percent of the Negroes and 27 percent of the whites chose the most difficult envelope. Consequently the moderately difficult choice -- a reflection of high achievement motivation -- was selected by 44 percent of the whites and only 31 percent of the Negroes. It is as if Negro children often do not learn the rules of successful competition in school, that in order to succeed one must set moderate goals. Especially interesting was the fact that during the period when social comparison interests are so critical with children (grades 3-5), white children apparently learn to shift to

moderate goals while Negro children do not. If the "sensitive period" hypothesis about social comparison at this age is valid (cf. Veroff, 1967), attention to such learning in the desegregated or segregated settings would seem to be important.

2. Not only for the Negro child but also for the white child, being in a school setting that puts him into a "minority" classification either actually calculated or as defined by a discrepancy from his other social experience, seems to go hand-in-hand with defensive overaspiration, at least in the social comparison type of achievement motivation. There are major exceptions -- such as the Negro boys in the predominantly white school as we have already noted. It would be worthwhile examining what factors counteract the general trend, but investigators and educators should be aware of the general trend in considering programs of desegregation.

3. For both the Negro and white youngster, a defensive overaspiration in desired level of social comparison seems to go hand-in-hand with being in a school in which the socio-economic composition deprives him of extensive contact with children whose background represents a higher socio-economic status than his own when he is of low to moderate social status. The same may hold true for a child deprived of school contact with children of similar status when he is of high social status. These results corroborate Coleman's conclusions that it is the middle-class aspect of schools that is associated with high achievement. Combining this conclusion with the preceding one about minority classifications suggests that to guard against defensive overaspiration in children a desegregation program has to juggle two paradoxical factors. It first must avoid placing Negro or white children in positions in school that make them feel a salient "minority" status. It must also provide contact with children whose background represents a higher status than their own. All of this suggests the desirability of a school desegregation program that promotes a thorough intermixing of children of different races and social classes.

4. Shifts in autonomous achievement motivation occur most consistently for both races in the early grades. These results suggest that teachers can be most effective in giving individualized attention to a child's goal-setting behavior when the child is in the early grades of elementary school. Desegregation programs could take this conclusion into account.

5. Boys are consistently higher than girls in setting desired levels of social comparison. These results confirm Crandall's convincing findings (1967) about sex differences in the expectancies of success. Teachers in desegregation programs should be alerted to this difference between boys and girls.

In all of this discussion we should bear in mind that this study reflects only the first year of a desegregation program. Results can reflect not only the effects of the new school arrangement and its particular racial and social class mixture, but also the effects of the transition itself. Follow-ups of these children over a more extended time are required before conclusive effects of desegregation on achievement motivation can be adequately gauged. We should also bear in mind that results differed somewhat depending on which measure of achievement motivation we examined -- the measure of autonomous achievement motivation or the measure of social comparison achievement motivation. Evaluation of programs may be different depending on which of these measures is a more valued part of social change. Finally, the relationship of the motivation measures to actual performance in different settings will be a critical analysis to look at for different groups.

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Appendix E

DISTRIBUTION OF POSTTRANSFER CHANGES IN IQ AND READING IN THE TRANSFER GROUP

As an initial step in the investigation of posttransfer change (see Chap. 11), transfer pupils were categorized in terms of the degree and direction of change reflected in their posttransfer IQs and reading scores. The resulting distributions are shown below.

Changes in Lorge-Thorndike Total IQ (Table E-1) were categorized as gains, losses, or no change. Gains and losses

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Table E-1. DISTRIBUTION OF CHANGES IN TOTAL IQ AMONG TRANSFER PUPILS

	Gain (+5 and above)		No change (0±4)		Loss (-5 and below)	
	n	%	n	%	n	%
By subgroups:						
White boys	6	55	2	18	3	27
Negro boys	24	54	13	30	7	16
White girls	2	67	1	33	0	0
Negro girls	23	45	20	39	8	16
By race:						
White	8	57	3	21	3	21
Negro	47	49	33	35	15	16
By sex:						
Boys	30	55	15	27	10	18
Girls	25	46	21	39	8	15
By grade:						
K	13	65	6	30	1	5
1	6	33	5	28	7	39
2	12	44	10	37	5	19
3	8	67	2	17	2	17
4	4	31	7	54	2	15
5	12	63	6	32	1	5
Total	55	50	36	33	18	17

were arbitrarily defined as pre- to posttransfer differences of 5 or more points.

Changes in Gates Average Reading Performance (Table E-2) were categorized with reference to the test norms as representing "normal" or greater gains, less than normal gains, or no gain or a loss. A "normal" gain, here, was defined as a pre- to posttransfer increment in reading age of 12±2 months, allowing for the imprecision of individual scores. Thus, a child was classified as showing a normal or greater gain if his posttransfer age-equivalent score showed an increase of 10 or more months above his pretransfer score. A range of 0±2 months' difference was treated as no change; hence, children showing posttransfer changes of +2 months or less were assigned to the "loss or no gain" category.

Table E-2. DISTRIBUTION OF CHANGES IN GATES READING SCORES AMONG TRANSFER PUPILS

	"Normal" gain or better (≥10 mos.)		Less than "normal" gain (3-9 mos.)		Loss or no gain (≤2 mos.)	
	n	%	n	%	n	%
By subgroup:						
White boys	4	44	3	33	2	22
Negro boys	9	24	18	49	10	27
White girls	2	67	0	0	1	33
Negro girls	18	44	17	41	6	15
By race:						
White	6	50	3	25	3	25
Negro	27	35	35	45	16	20
By sex:						
Boys	13	28	21	46	12	26
Girls	20	45	17	39	7	16
By grade:						
1	4	22	13	72	1	6
2	9	32	15	54	4	14
3	7	58	1	8	4	33
4	6	46	5	38	2	15
5	7	37	4	21	8	42
Total	33	37	38	42	19	21

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